



AN
AUTOBIOGRAPHICAL MEMOIR
OF

JOHN SHORTT,
M.D.; V.S.; F.L.S.; F.Z.S.; Etc.

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AN
AUTOBIOGRAPHICAL MEMOIR

OF

JOHN SHORTT, M.D.; V.S.; F.L.S.; F.Z.S.; &c.,

FELLOW OF THE MADRAS UNIVERSITY,

Deputy Surgeon-General, Indian Medical Service.

AUTHOR OF

"A HAND-BOOK TO COFFEE PLANTING IN SOUTHERN INDIA."

"A MANUAL OF INDIAN CATTLE AND SHEEP, THEIR BREED,
MANAGEMENT AND DISEASES."

"THE HILL RANGES OF SOUTHERN INDIA."

"A MANUAL OF FAMILY MEDICINE FOR INDIA."

"A MANUAL OF INDIAN AGRICULTURE," &c., &c.

MADRAS:

HIGGINBOTHAM AND CO.

By Appointment in India to His Royal Highness the Prince of Wales.

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PREFACE.

AS DR. BALFOUR was revising his notices of Medical men who had done good work, or attained eminence, or made a name, in India, he wrote to the late Dr. Shortt for particulars regarding his life. When, in compliance with this request, the subject of this memoir was drafting it, the suggestion was made to him that he should have in view not only Dr. Balfour's request, but the lessons and encouragement which the story of such a career as his was likely to convey to young men, especially to the descendants of Europeans born and brought up in this country. Those who knew the Doctor best will think his sketch too meagre : it fails to shew some of his habitual good works, which contributed to his success and brought a blessing on his labours. Nor does it convey an adequate notion of the service he did to the country by the sedulous imparting, both in private letters and through the press, of useful information out of the reach of the generality of Europeans in this country. The information was given as it was sought; and it was such

as could be given by one who had a close acquaintance with the country, its products and its people, and who possessed extensive scientific information, a library of scientific books, and ability to use them readily. Dr. Shortt had the humility and good sense not to despise any man, and not to despise or neglect any knowledge, thing or effort that was likely to be of the least use. His own aim and ambition, not always understood, was to be of all the use he could to his fellow-creatures. But, partly by reason of one or two infirmities, he of late generally succeeded best when working alone. A few brief notes are added to his biography, to supply information which is likely to be interesting to the reader.

DR. JOHN SHORTT.

AN AUTOBIOGRAPHICAL MEMOIR.



I WAS born on Tuesday the 26th February 1822, at 8 o'clock A.M., at Arcot; and am the 10th child of a family of 14 children. My paternal grandfather was an Irishman and a Major in the Honorable East India Company's Service. My maternal grandfather was an Englishman and a Sergeant in the Honorable East India Company's Service: he was the first to convey the news of the mutiny of Vellore to Colonel Gillespie, who commanded the 22nd Light Dragoons at Arcot,—he being at the time a pensioner residing at Vellore. My father originally entered the service of the Nabob Walajah, and was subsequently transferred to the service of the Honorable East India Company, and became a Conductor in the Ordnance department. He rendered special service in maintaining order at Arcot, where he was Barrack Sergeant, at the time of the Vellore mutiny. After being invalided, he resided for many years in Vellore, where he died in 1837 at the

age of 77. My mother died at Madras in 1840 at the age of 50 years.

My education was sadly neglected,—there being no school in the place except that known as the Vellore Charity School, which my father greatly helped to bring forward, and to which, for some time, he gave his full support. Owing to a dispute with the School Committee about a peon, we were withdrawn from it; and after a while we were sent to a small private school kept in the town by an old Portuguese gentleman. He was an odd character, and gave more attention to his “queue” than to his school. For the greater part of the day he would keep us at prayers; and after every sentence of a sort of litany which he read out, we had to say “Ora pro nobis.” When this was done he would retire; and his wife, a fat old native woman, would come out and order us to lay down our books, and go and look after her vegetable garden. Of course we were delighted at this, as we preferred the garden to our books. A short time afterwards, one of my brothers came down from St. Thomas’ Mount to see our parents, and he took me back with him, promising to send me to school there: but this was not done for over a year, and I was simply idling away my time. At last I was sent to the

3rd Battalion Artillery School ; where, after a short time, the schoolmaster was promoted, and removed. My brother was not friendly with his successor ; and I was withdrawn from this school, and then sent to the 2nd Battalion Artillery School. In a few months I was sent for home, and had to go back to my parents. After another short interval, another brother came down and took me away to Bangalore, where I remained idling for nearly two years. I was then sent to the school of the 13th Dragoons for a short time. Amongst my school-fellows in this school were the boys of the Miller family, one of whom was the late much respected Barrister John Miller. My parents once more sent for me home ; and after a while I entered the Subordinate Medical Department. In 1841 I and some others were ordered to Madras to undergo a competitive examination, and in it I lost two or three places. This troubled me much ; and when I was posted to the Artillery Hospital, St. Thomas' Mount, I sought and obtained permission from the Rev. Mr. Blenkinsop, the Chaplain of the station, to attend the Adult School for some time, to improve my deficient education. The master was a drunken fellow, and was always wanting to borrow money from me. With this my

school days ended ; but from that time forward I took every opportunity of improving myself by reading and studying at home. I also learnt the Tamil and Teloogoo languages, which I found of great use in after life.

I entered the Subordinate Medical Department as a public volunteer in 1836, and rendered good service in the hospitals of the 9th, 1st, 40th, 48th, 15th and 13th Regiments of Native Infantry, and the Garrison Hospital successively, whilst these Regiments were stationed at Vellore. On several occasions I performed the entire subordinate service in these hospitals, to the avowed satisfaction of the various medical officers in charge, whilst the Apothecary and Dressers of these several Regiments were absent on other duty. In 1839, under the impression that the 48th Regiment N. I. was proceeding on field-service to Kurnool, I volunteered for that service, and accompanied this corps, but only as far as Cuddapah, this Regiment not proceeding further. After a short stay there I returned to Vellore. Whilst at Cuddapah, I was supported by Surgeon Quentin Jameson, the Surgeon of the Regiment, to whom I am indebted for much kindness. Upon the death of my father I became a Paid Candidate for Medical Service on seven Rupees

a month. In 1841, as the result of a competitive examination, I became a 2nd Class Medical Apprentice, in 1842 a Junior, and in 1844 a Senior, Medical Apprentice, after joining the Medical School in Madras. I was then appointed Assistant Apothecary on the 20th January 1846, and posted to the 1st Regiment of Light Cavalry ; which Regiment I joined at Jalnah, and with which I did duty at that station, and afterwards at Arcot and Bellary, down to 1852, when I was removed to Madras. In the 1st Regiment of Light Cavalry I succeeded in winning the respect and confidence of the officers and their families, as well as of the European and Native non-commissioned officers, and of the privates ; and on my leaving the Regiment, the officers presented me with a gold watch with the following inscription : " Presented to Mr. John Shortt by the officers of the 1st Madras Light Cavalry as a token of esteem and regard, 1854," together with the following letter from the late Major Raikes :—

" DEAR SIR,—I send you this note for you to take to the shop of Mr. McCabe at No. 32, Cornhill, London ; on presenting which you will be furnished with a gold Hunting watch, which I have ordered at the request of the officers of the 1st Cavalry as a token of respect and esteem for you. The officers are anxious to present you with something which would be really *acceptable* and *useful*, and we

determined that a watch was as good a thing as we could order; and it will be gratifying to you to receive it as soon as possible. I hope by the time you call at Mr. McCabe's it will be ready for you; and as it is given with the most hearty feelings of esteem from those who had an opportunity for years of judging of your worth, I hope the little inscription on it may add to its value as a present. With my best wishes for your success, health and prosperity,

Believe me,

Your sincere friend,

(Signed) W. RAIKES."

I received this note and the gold watch whilst studying in England in 1854. The European Warrant and non-commissioned staff presented me at the same time with a silver tea-pot; besides which I received special tokens from each individual officer present with the Regiment at the time. When I was with this Regiment at Bellary, one of the officers, Lieutenant Lord David Kenedy, was out shooting in the country, and was there seized with cholera: and I was ordered to proceed forthwith to afford him such medical aid as might be found necessary. I started at once,—it was at 11 A.M. in the month of May,—with a few bottles of medicines, which I thought would be useful, wrapped in a towel tied round my waist. I started at full speed: the guide, who was mounted on another horse, was thrown off before he

had ridden a hundred yards; and I was thus left to find my own way to Goodiacotta, a distance of some forty-five miles from Bellary. I rode the horse on which I started, twenty miles at one stretch, and rode as fast as he could go. He dropped all his shoes on the way; and would, I believe, have dropped himself, if I had ridden him another mile or two. Fortunately, Captain Cameron of the same Regiment, who was out with Lord David Kenedy, sent out another horse to meet me. Having changed horses, and taken about five minutes rest, I started again with the word 'Goodiacotta' on my lips whenever I met any of the natives. Not knowing the way, I went on in whatever direction they pointed; and I reached Lord David Kenedy's camp exactly at 2 P.M.

I was so stiff that I was unable to dismount, and I had to be carried off the saddle and placed on a chair, and thus carried into the tent in which Lord David Kenedy lay. I found him cold and pulseless, with sunken voice and pallid countenance; and I at once administered such medicines and restoratives as I could command. After I had taken some refreshment myself, I was able to look about me. I found the camp pitched under a tamarind tree, and surrounded with swamps, and with dead cattle lying about.

There had been a thunderstorm with heavy rain on the previous day, which had made the camping ground damp and unhealthy. In the evening I had the camp struck and removed to a dry and well raised spot ; where, after the tent had been pitched, I had the patient removed. I sat beside him the whole night with my hand on his pulse ; and to my great joy, at about 1 A.M. I found a flicker of the pulse off and on. In the course of another hour, it was fully established. I then held out to the patient hopes of recovery, which I could not do before, though repeatedly asked. There was cholera amongst the camp followers also at the time. I asked Captain Cameron, Lord David Kenedy's sporting friend and companion, to order some beef-tea for the patient. The Captain looked aghast at me : " Beef-tea ! " he exclaimed, " where are we to get the beef from ? " " Why," I said, " send to the village and get a cow ; the patient is well able to pay for one : and after securing the required beef for the tea, distribute the remnants among the followers." " By Jove," said the Captain, " that is a capital idea ; we can have shin-soup too." The cow was got, and we enjoyed the tea and the soup ; whilst the followers had the rest of the carcase, which they much needed ; for, from being wet

and unable to get proper supplies from the village, they were half-famished. The next morning, with the cot on which the patient lay, improvised as a dooly, we made a march of ten miles, and eventually got to Bellary on the 4th morning,—the very distance that I had ridden in three hours!! This case won me much credit in the station, as the patient was a favourite, not only in the Regiment, but in the whole Cantonment also. His recovery resulted, I fully believe, not from my medical treatment alone, but also from his own previous good health and sound constitution. The following extract of a letter from the Medical Board, Madras, was on this occasion received by me through the Superintending Surgeon :—

“Extract from the Medical Board’s letter, No. 771, Fort St. George, 12th June 1851; to Superintending Surgeon ROBERT SCOTT, Ceded Districts, Bellary :—

“You will convey the approbation of the Board to Assistant Apothecary Shortt for the judicious treatment of the case of Lieutenant Lord David Kenedy of the 1st Regiment Light Cavalry.

(A true Extract.)

(Signed) ROBERT SCOTT,

Superintending Surgeon,

Ceded Districts.

SUPTDG. SURGN’S. OFFICE, C. D., }
Bellary, 20th June 1851.” }

The following is an extract on the same subject from a letter which I subsequently received from Lord David Kenedy himself :—

. “ With best thanks for the very kind and successful manner in which you treated me ; and there is but little doubt that, but for your timely arrival at Goodiacotta that day, I should not now have the pleasure of testifying to your skill.

(Signed) D. KENEDY,

BELLARY,
18th June 1851.” }

1st Cavalry.

The following Regimental Orders were published on my leaving this Regiment :—

“ Extract from the Regimental Orders of the 1st Light Cavalry, by Major P. T. CHERRY, Commanding, dated Bellary, 29th June 1852 :—

“ R. O.

“ The Commanding Officer cannot allow Mr. Shortt to quit the Regiment in which he has so long and so efficiently pursued his vocation, without tendering to him his expressions of perfect satisfaction at the manner in which he invariably discharged his duties. Major Cherry feels that all grades in the Regiment share with him in his regret at Mr. Shortt's removal from amongst them ; for to the officers and their families, as well as to the sepoy and followers, Mr. Shortt has ever proved himself eminently useful by his untiring attention and professional skill. By his zealous and persevering endeavours to improve the moral and religious feelings amongst the Christians of the Regiment, he has won for himself the regard of all. He leaves the Regiment carrying with him the good wishes and respect of all grades, who concur in wishing that

every success may attend him in his professional career, and that he may enjoy health and every happiness.

(A true Extract.)

(Signed) H. E. DYNELEY, Lieut.,
Adjutant, 1st Regt., Light Cavalry."

The following letter from the same officer accompanied the above extract :—

"It is with much gratification I have the pleasure to send you the accompanying extract of this day's Regimental Orders;—and in doing so, I cannot refrain from expressing to you the entire concurrence of Mrs. Dyneley and myself in every sentiment contained therein. Your incessant care and watchfulness over me during my two severe attacks of illness in this country, jungle fever and cholera, together with your kind attendance upon Mrs. Dyneley (whose health I consider under Providence has been restored to her solely by your zeal and skill), renders your quitting the Regiment a source of real sorrow to us both. Believe me, Mr. Shortt, that Mrs. Dyneley and myself sincerely wish you and Mrs. Shortt* every happiness and prosperity this world can afford."

In 1852, I was removed to Madras, and attached in the first instance to the Leper Hospital, and subsequently to the Vepery Dispen-

* The first wife. Dr. John Shortt was thrice married; and his wives bore him nine children, of whom six survive him, one son and five daughters, two of the latter being married.

On the 6th September 1848 he married Miss Isabella Cuisset, a French lady, 16 years old. The ceremony was performed in St. Mark's Church, Madras, by the Rev. Mr. Posnett. This wife died at Bangalore in 1854, less than six years after her marriage, having borne three children, Cecelia, married to John Edward Breary; Johanna, who died in infancy; and Isabella, married to John Archibald Duncan Macdougall.

sary. When I was at Madras, the post of Assistant to the Professor of Anatomy at the Medical College became vacant, and was put up to competition. Of the Madras candidates, I was the successful one; but two others came forward from Bangalore and Kamptee, and I had to compete again with them. One of them won the appointment; and I felt great disappointment amounting to a sense of injustice; for I was in a great measure a self-educated man, as I had received only eighteen months' instruction in what was then called the Madras Medical School, when it had only two Professors for all subjects; whereas my rivals had received a thorough medical education of four years' duration at the reconstituted Medical College, when it had some half-a-dozen Professors. My qualifications of all kinds were such as to make me the senior of the competitors; and it seemed to me that, under all these circumstances, I ought to have received the appointment; and when it was given to one who was my junior, I felt disgusted with the service. I obtained the following certificate at this time from the Secretary to the Medical Board:—

“No. 652.

“Certified that Assistant Apothecary John Shortt attained that rank on the 20th January 1846, and has performed the duties thereof in a satisfactory manner. He has taken

every means to improve himself in professional knowledge; and when a candidate for the appointment of Assistant at the Medical College, though unsuccessful, his attainments were pronounced by the Committee of Examiners to be of a high order and deserving of great commendation.

(By order.)

(Signed) A. LORIMER, M.D.,

Secretary to the Medical Board.

FORT ST. GEORGE,
MEDICAL BOARD OFFICE, }
15th May 1853."

" I had a good friend in District Surgeon James Kellie, under whom I was then serving; and by his advice I now resolved on going to England. This was a bold step to take, as I was a married man and had two children. Moreover, I had not the requisite money: but having taken my resolution, I put together what little I had, and, with the assistance given to me by my brother-in-law, the late Mr. Norman Morison, of the firm of Messrs. Morison & Co., I made the venture. Because I was a married man, I was reluctant to resign my appointment; and leave of absence was at first refused me. A member of the then Medical Board was against me,—the same gentleman who was President of the Board of Examiners, before which I competed for the Assistantship

in the Medical College. Not that he had any personal feeling against me ; but being, unfortunately for me, on unfriendly terms with the gentleman who strongly supported me, he made it a point to condemn everything which he recommended ; and I became the unfortunate sufferer. However, I waited on the obstructive gentleman in person, and explained my case fully to him ; on which he not only was pleased to grant me the leave, but also kindly gave me a letter of introduction to the Rev. Mr. Oliver, Chaplain of King's College Hospital, London.

Having obtained twelve months' furlough, I left India on board the P. & O. Steamer from Bombay, on the 9th November 1853 ; from which date opens a new era in my life. Everything was new to me on board ship ; and I followed the prevalent fashion of walking the decks with bare feet of a morning, whilst the former were being washed and scrubbed. The result of this was that I was attacked with a severe fit of asthma, a disease from which I had never suffered before, and which had never been known to exist in my family. I placed myself under the treatment of the Doctor of the steamer, who, besides other remedies, blistered my chest. As I was very ill, my feelings at the time can be better imagined than de-

scribed: for I hardly expected to reach England alive; and all my ambitious hopes seemed doomed to sink to the bottom of the sea. But, thank God and a good constitution, I gradually recovered, and, at 6 P.M. on the 24th of December 1853, landed at Southampton, a perfect stranger. On my consulting a friend, who had been a Scripture Reader and a patient of mine at Madras, he wrote and advised me to go to the 'Falcon-and-Castle' hotel in the city; and thither I went on my arrival in London at 11 P.M. Not knowing that I could have had a fire in the room, I suffered much from the cold that night. The next day was Christmas day and a Sunday; I therefore found the streets all deserted, and could visit no one. I attended service in a church close by, where there was only one other worshipper; and I dined that day, for the first time in my life, on boiled beef and greens. The next morning I started on my rounds to deliver my letters of introduction, but found most places empty, owing to the Christmas holidays. People were surprised at the ease with which I roved about and found my way from place to place, although a complete stranger. I saw the Rev. Mr. Oliver, the Chaplain of King's College Hospital, who said he had a spare room in his attic; and that his son

being a medical student at King's College Hospital, I might come and board with him. This offer I thankfully accepted at once ; but after about a month's stay, I found the place too expensive for me, and had to go into other lodgings. As soon as King's College re-opened after the Christmas holidays, I applied for permission, and attended the College and its Hospital as a free student,—a privilege which was then granted to those in the service of the East India Company. At the same time, I addressed the Directors of the East India Company, individually and collectively, reporting my arrival, stating the objects I had in view, and begging for an Assistant Surgeon's appointment. I received kind and plausible replies from one and all, stating that, as their tenure of office was to expire shortly, they had no appointments to give ; and that such as had been at their disposal were already given away or promised. Sir Charles Wood, the President of the Board of Control, whom also I had addressed, replied through his Secretary, giving me credit for my exertions, &c., and saying he was sorry he could not help me ; and he further told me that, as the appointment of Assistant Surgeon was soon to be thrown open to competition, I might compete for one. This I offered to do, if he would kindly

excuse my age, which was a little above that put down for competitive candidates; but he said he could make no exception in my case. I made many kind friends, foremost among whom was Charles Dyneley, Esquire, Secretary to Doctors' Commons, to whom I had an introduction from his nephew, Lieutenant Dyneley of the 1st Madras Cavalry, whom I have mentioned above. By the uncle I was most warmly received, and I experienced from him much kindness and assistance in various ways. I had also an introduction to W. T. Hooper, Esquire, of the East India House, through Colonel Marshall, then Military Secretary to the Madras Government. Mr. Dyneley, who was a great friend of Mr. Hooper's, also saw him and interested him on my behalf.

On the 10th March 1854, I went up for my examination before the Royal College of Surgeons, and obtained my Diploma of membership. I was congratulated on having passed the best examination of the twelve who went up with me, and of whom five were plucked. On the 5th April 1854, I again went up before the Court of Examiners of the Royal College of Surgeons, and passed my examination, and obtained the diploma of Licentiate of Midwifery from that College.

I next prepared for securing the degree of M.D.; and having put myself in communication with the authorities at King's College, Aberdeen, I obtained the Diploma of M.D. of that University on the 12th April 1854. Out of twelve who presented themselves, only five succeeded in obtaining the Doctorate. Among those who failed were two Irishmen, who were sadly disappointed, and who would gladly have paid double the amount of fees, if they could thereby have procured the degree. These gentlemen were in the same lodgings with myself; and when, having taken a cold in a train, I had another attack of Bronchial asthma, I experienced much kindness and attention at the hands of these fellow-lodgers. As soon as I recovered, I returned to London, and saw some of the East India House Directors, as well as Major Oliphant, the chairman of the Court of Directors. When he said he could not help me, I asked him for a Veterinary Surgeoncy, telling him that I could qualify for it. He said the two first vacancies were already promised; but promised that, if a third occurred, he would give it to me. I immediately started for Edinburgh to study, in Dick's Veterinary College, the Veterinary art, of which I had already obtained some elementary knowledge. In about another

month's time, I should have obtained the Diploma, when I received the following note from Mr. Hooper:—

“EAST INDIA HOUSE,
July 20th, 1854.

MY DEAR SIR,—It affords me very great pleasure to inform you that I have succeeded in obtaining for you a Madras Assistant Surgeoncy, which you are at liberty to take up as soon as you please; and if I may be allowed to advise you, I should add, *the sooner the better*, for reasons which I will explain when I have the pleasure of seeing you.

Believe me,
Yours very truly,
(Signed) W. T. HOOPER.”

I was anxious to take up this appointment at once; and on my consulting the Professors about breaking off my Veterinary studies before the completion of the course, they kindly gave me the following certificate:—

“VETERINARY COLLEGE, EDINBURGH,
29th July 1854.

We, the undersigned Professors and Lecturers at the Edinburgh Veterinary College, hereby certify that John Shortt, M.D., attended the College during the summer Session, 1854, and paid great attention to the systematic lectures as well as to general Veterinary practice.

From his medical education and veterinary experi-

ence we consider that he is well qualified to practise the Veterinary art.

(Signed) WILLIAM DICK,
Professor of Vety. Medicine & Surgery.

(Signed) JOHN BARLOW, v.s.,
Lecturer on Anatomy & Surgery.

(Signed) FINLAY DUN, v.s.,
Lecturer on Materia Medica & Dietetics."

I must not fail to mention how much I was indebted to my kind friend, Finlay Dun, Esquire, for advice and guidance during my stay in Edinburgh. With the above certificate I returned to London and saw my friends. Among them, I should mention, not only Charles Dyneley, Esquire, my best friend and patron, but also John Morris, Esquire, of the Madras Civil Service, retired, and Major Chase, also of the Madras Service. These were the chief amongst a number of others. The following note speaks for itself:—

"LONDON, 31 NOTTINGHAM PLACE, NEW ROAD.

MY DEAR SIR,—The enclosed I received last evening from Mr. Hooper at the India House, and most sincerely do I congratulate you on your success. With regard to securing your Veterinary Diploma, you can do as you think best; though it would be a pity to abandon it, now you are so near maturity, particularly as there would be no hurry about taking up the Assistant Surgeoncy.

(Signed) M. C. CHASE."

The enclosure alluded to runs as follows :—

“MY DEAR MAJOR,—You will, I know, be glad to hear that I have succeeded in securing a Madras Assistant Surgeoncy for Shortt.

In haste, but always,

Yours sincerely,

(Signed) W. T. HOOPER.”

Mr. Hooper obtained the Assistant Surgeoncy for me from Captain Eastwick, one of the Directors of the Honorable East India Company.

I returned to Madras with my appointment, and saw my friends. Although I had been so successful in my trip to England, whilst I was there I had to deplore the death of my wife at Bangalore ; also that of my sister, Mrs. Morison.

On reporting myself to the authorities at Madras, after the usual interval of about a month, I was appointed to the Medical charge of the Ganjam Topographical Survey, and directed to proceed by Palkee-Dâk forthwith, as the Survey Party were about taking the field.

On reaching Ganjam, I found that the Head-Quarter Office of the Survey was not there, but at Cuttack, and that there was no one at Ganjam. The Collector was at Berhampore, fourteen miles away ; and I was alone with my palkee in a large empty house, and had to await, for some

three or four days, the laying of another Dâk to Cuttack. When I reached Cuttack, I went direct to Captain Saxton, the Commandant of the Survey, and was most cordially received and hospitably treated by Captain and Mrs. Saxton. The Survey was to take the field in the course of three or four days, and was to remain in the wilds of Orissa for some four months. After nine days' continuous dawking, I arrived at my Head-Quarters without anything but my clothes; so that I had to look about me at once to secure a tat, a tent, servants, &c. Captain Saxton had kindly arranged about my messing; and another officer, Lieutenant Depree of the Bengal Artillery (who was Captain Saxton's nephew), joined us as the Captain's assistant. We took the field on the 18th December 1854, and returned to Head-Quarters on the 5th April 1855. In this interval we marched every day in the week except Sundays, when there was a halt, and except when the Captain went up a hill to triangulate the country around and establish stations for the ensuing year, on which occasions he sometimes made a halt of two or three days. I had a pleasant time of it, shooting on my way from station to station. As both Captain Saxton and Lieut. Depree were most friendly and amiable

men, we got on more like brothers than friends. The villages were small, and the population scanty ; and as soon as our camp arrived in the vicinity of any of them, the inhabitants, after the manner of their fathers when visited by officers under native rulers, would desert their houses and flee to the jungles or hills. I always made a point of visiting these deserted villages, where I was sure to meet with one or more decrepit men and women who had been unable to follow their friends in their flight. I would sit beside some one or more of these, talk to them, feel their pulse, and give heed to their complaints : and as I was in the habit of carrying some croton pills in my pocket, I would give them a pill each and return to the camp. Before evening not only would the deserters return to the village, but they would bring to the camp all their sick relatives and friends for treatment. At times these would follow our camp for days with the utmost confidence, to have the treatment continued.

On the return of the Survey into Cantonments, I was ordered to do duty at the Garrison Hospital, Vizagapatam, where I remained for a time, and was asked by Superintending Surgeon Cooper to lecture to the Medical subordinates. This I did, and received Dr. Cooper's thanks officially for so doing.

I had at this time a short run to Madras on leave, when I went up for my examination as Interpreter in Tamil, which I passed successfully. I next went up for Telugu. At the time of this examination I was suffering from a whitlow on the index-finger of the right hand, and was in pain. My writing consequently was bad. The Examiners gave me great credit for the manner in which I acquitted myself, but, owing to my bad writing, would not pass me for an Interpreter, but passed me as an oral Interpreter! A most difficult examination it was.

As I was refused an extension of leave, I had to return to Vizagapatam; and I was again directed to join the Ganjam Survey, which I did. I was out in the field with them for another period of four months and a half. During our travels I used to meet with large numbers of pilgrims on their way to Juggernath Puri, many of them seriously ill; and I used to stop these poor people on the way, and give them such relief as lay in my power on the road side. Very many I relieved from much pain and suffering; and where our camp was pitched, the villagers ceased deserting their houses, and freely brought their sick to me for

treatment.* Captain Saxton, who was a daily eye-witness to all I was doing for the poor people, very kindly and without my knowledge, brought my services to the notice of the Commissioner of Chota Nagpore, in whose district the Survey was at work ; and that gentleman represented the same to the Lieutenant-Governor of Bengal. I was surprised one morning at receiving the following orders :—

“ MILITARY DEPARTMENT.

No. 747.

Extract from the Minutes of Consultation, dated 6th March 1855.

Read the following :—

The Lieutenant-Governor of Bengal has much satisfaction in forwarding for submission to the Madras Government the accompanying copy of an extract of a letter from the Commissioner of Chota Nagpore, dated 5th instant, noticing the very praiseworthy exertions of Assistant Surgeon Shortt, of the Madras Establishment, who is at present attached to the Survey Party under Captain Saxton, engaged on the Survey of the South-Western Frontier Agency.

(Signed) W. GREEN,
Secretary to the Govt. of Bengal.”

“The Right Honorable the Governor in Council has

* The medicines were supplied out of the good Doctor's own private medicine chest. Some of his old friends testify that it was always his custom, as well when a poor subordinate as when a commissioned officer, to set apart a room in his house, where he could treat the sick poor, with whom he had no official connection ; and that he used to give them medicines, and sometimes even diet them, at his own expense.

perused the following correspondence, bearing highly creditable testimony to the praiseworthy exertions of Assistant Surgeon Shortt, with much pleasure; and he directs that it be communicated to the Commander-in-Chief.

(Signed) C. A. BROWNE, Lieut.-Col.

„ W. G. WOODS, Lieut.-Col.,

Adjutant General of the Army.

To the Members of the Medical Board

for information and communication to

Assistant Surgeon Shortt.”

The following is a copy of the Official Record of this circumstance :—

Extract from a letter from the Commissioner of Chota Nagpore, to the Secretary of Government of Bengal, No. 22, dated 5th February 1855.

“Para. IV. I take this opportunity of bringing to the notice of His Honor the very praiseworthy and philanthropic exertions of Mr. Assistant Surgeon Shortt, whilst he has been attached to Captain Saxton’s Survey. I know that he has done much by his personal kindness and professional skill to conciliate the rude and simple inhabitants of these jungles; he has afforded important medical relief in many cases, the remembrance of which will remain, and is likely to act very favourably for any European who may at any future period visit these remote districts.”

While on duty with this Survey, I drew up a Report on the Medical Topography of the South-Western Political Districts, &c., which was submitted to Government. The result is

expressed in the following Proceedings of Government respecting it :—

“POLITICAL DEPARTMENT.

No. 36.

Extract from the Minutes of Consultation, 14th Aug. 1855.

Read the following letter from the Secretary to the Medical Board :—

Resolved that Assistant Surgeon Shortt's Report, which the Government think very creditable to him, be printed among the selections from the Records of Government.

(A true Extract.)

(Signed) J. D. BOURDILLON,

Secretary to Government.”

Extract from a letter from the Commissioner of Chota Nagpore :—

* * * *

“I have submitted a copy of your Report for the information of the Government of Bengal, and have stated that I consider you entitled to great credit for having collected the very useful information contained in your Report regarding these remote jungle Districts.

(Signed) W. J. ALLEN,

Commissioner of Chota Nagpore.”

Shortly after the Survey Party separated at the close of the Survey season, I received the following letter from the Commandant :—

“FALSE POINT, APRIL 18TH.

I hope this will be in time for you. I did not attempt to say anything I felt when wishing you good bye; for I should have utterly failed; but I assure you I did not,

and do not, think lightly of parting, in all probability for the last time, from one with whom I had formed so intimate an acquaintance, and to whom I feel much indebted for having in a great measure made my last two seasons of field-surveying times of happiness such as I cannot hope for again. Very few men would be happy, contented and sociable, as you ever were. We have lived together, and have felt, like brothers, and I shall always be glad to hear from you on terms of close friendship. I may be able to execute commissions for you in England, and shall be delighted to do so, and will try to meet your exact wishes. I shall be glad to hear of your completing your tremendous march, and then getting comfortably settled down. I shall write you from Madras an account of your children. Mrs. Barklay seems better; and you are high up in Barklay's list. How came you to lose Juno? I hope she is restored to her proper position. And now, my dear Shortt, with my best and kindest wishes to you,

Believe me ever

Yours most sincerely,

(Signed) S. H. SAXTON."

On the completion of my second Field season with the Survey, I was posted to the 40th Madras Native Infantry at Kamptee. When I had travelled almost up to Kamptee, I was ordered away from the 40th Regiment and posted to the Northern District, owing to a rising and disturbances among the Hill tribes of the Purla Kimidy District. On this movement appearing in orders, my friend Captain Saxton, who was at Madras at the time, immediately

addressed the Adjutant-General, and pointed out the hardship,—after I had been four months in the jungles, and just as I had got so near to Kamptee,—of my being thus ordered to the Northern District, and required to come all the way back to take up this new appointment. On this protest from my friend, unsolicited by me,—in fact, I had not seen the order of removal itself,—this order was cancelled; and I was posted to the B. Troop, Horse Artillery, which I had by this time joined at Kamptee. I was placed in medical charge not only of the B. Troop, Horse Artillery; but also of the Headquarters of the first Battalion of Foot Artillery. I held these appointments for some time; and also often held medical charge of the 17th and 23rd Regiments N. I. for short periods, at the same time that I did duty with the European Artillery. I was then removed back to the 40th M. N. I., which was under orders for Cuttack; but was meanwhile placed in Medical charge of the 17th N. I. under orders for Kurnool. I had to march with this Regiment as far as Hingolee, where I was relieved by Assistant Surgeon Keess; and I had then to turn back to Kamptee to join my own Regiment, the 40th, and proceed with them *en route* to Cuttack. On my leaving the 17th Regiment, I received the

following note from Colonel Babington, the Commandant :—

“MY DEAR SHORTT,—I am very sorry indeed that the arrival of Dr. Keess obliges you to deliver over charge of the Regiment to him and return to Kamptee. I cannot allow you to leave without expressing our regret at your departure, and thanking you for your kind attention during the time you have had the Medical charge of the 17th ; as also for the great attention you paid to all your duties, which appeared to be more a pleasure to you than a task. I sincerely wish you had acceded to my wish, and allowed me to have applied for you to be posted to the 17th, as I intimated to you at Kamptee was my desire. I trust, and so does Mrs. Babington, that you will have a prosperous and pleasant journey to Kamptee ; with which wish

Believe me to remain

Yours very sincerely,

(Signed) R. F. BABINGTON.”

I returned to Kamptee and assumed charge of my Regiment, the 40th N. I.

Shortly afterwards, observing that the Zillah Surgeoncy of Chingleput had become vacant, I applied for it at once. His Excellency, Lord Harris, Governor of Madras, kindly gave me the appointment : but first I had to march with my regiment to Cuttack ; and then I proceeded to take up the Civil appointment. On leaving the 40th Regiment, I received the

following few lines from Colonel Bates, who commanded it :—

“MY DEAR SHORTT,—I congratulate you on your appointment; though I am sorry to lose you from the Regiment. * * * * *

Before leaving Kamptee, I received the following from Superintending Surgeon J. T. Maule, of the Nagpore force :—

“MY DEAR SHORTT,—I bid you farewell; may your march be pleasant, and rendered the more so by absence of all sickness. It is many years since we were first associated together; and our positions were then different,—you the pupil, I the master: we are now on an equality; and I am certain that the same persevering efforts which gave you your commission will in due course elevate you to the head of our profession—abetted by the zeal and industry which have ever characterized your conduct; and that God may give you health to attain this, is the very sincere wish of your affectionate friend.”

On the arrival of the Regiment at Cuttack, I was relieved of the charge by Surgeon Cox; and I proceeded by Dâk to Calcutta, and from thence by steamer to Madras, and joined my post at Chingleput in June 1857.

Soon after I was settled, I went up for my examination as Interpreter in the Hindustani language, and passed it successfully, and received the Honorary reward of Rs. 1,000 for passing in two languages. (*vide* G. O. C. C., 14th November 1857.)

The Jailor and I were the only Eurasians who lived within the precincts of the Chingleput Jail at the time of the Mutiny in 1857. The Jail at that time contained, among other bad characters, a large number of life-convicts, who were under sentence of transportation to the Andaman Islands,—for it used to be the practice to send prisoners direct to this Jail till opportunities occurred for placing them on board vessels for transportation. At this time the small town of Chingleput was in a state of commotion in consequence of the arrival of a well-connected Mahomedan, a member of Tippoo's family, from Madras, who, it was said, was trying to stir up the people. One day, suddenly, the Civil and Sessions Judge, Mr. J. W. Dowdswell, walked into my house, followed by a Mahomedan gentleman. The Judge said to me, "Will you allow this gentleman," pointing to the person who followed him, "to be seated here for a few minutes?" and then he walked off. Shortly afterwards Captain Templer, Commandant of the Native Veterans, arrived with a few of his men, who were in undress, but wore their belts and carried their muskets. He called to one of them, and pointing with his finger to the Mahomedan gentleman, said,—“ You see that man there ; if he stirs, shoot him ;” and then the Cap-

tain left the house with some of his followers. I did not understand what all this meant : there was evidently something wrong. However, the man, who remained seated in my house all the morning, was in the afternoon placed in a carriage, surrounded by a body of Veterans, and sent on to Madras. Some days after, came the following note :

"I beg to offer you my best thanks for the assistance rendered me by you on Sunday in affording me the accommodation of your house for the reception of the State prisoner Sultan Bux.

(Signed) Y. B. TOD,

Head Assistant Magistrate."

The large and important town of Conjeveram formed a portion of my charge ; and here, after some trouble, I succeeded in founding a Civil Dispensary, in connection with which I performed several successful operations. One of these was a case of resection of the knee-joint in a Brahmin boy, at which I was assisted by the Rev. Dr. Scudder.

On settling at Chingleput, I found my medical duties very light ; and as time lay heavy on my hands, I turned my attention during my spare hours to agricultural and other cognate subjects. At the Local Agricultural Exhibition, Chingleput, in 1859, I competed, and

carried off Rupees 210 in prizes for cattle, sheep, poultry and vegetables; and at the Madras Exhibition of the same year, I obtained a first class medal for fibres, and honorable mention for produce. I also competed for, and obtained, the prize of Rupees 800 offered by the Madras Government for the best Essay on Indigo.

As I was in charge of the Vaccinators of the District, I had often to go out and inspect their work. On one occasion, I had a stroke of the sun when out in the District on this duty; and although I did not suffer much from this at the time, by reason of the expedients I resorted to at once; yet it told permanently on my hearing; and other symptoms of general nervous irritation of the system resulted from this attack. On taking medical advice, I was recommended to go to England; and I obtained fifteen months' leave on medical certificate.

In June 1859, with my two daughters, I left for England by the Cape of Good Hope route, in the ship *Edmondsbury*, of which I had medical charge. I took with me to England at this time several packages of Natural History specimens. There were six first class passengers on board: there were also twelve invalid Government soldiers under my special medical charge. We were four months and a half

making the voyage to England. It was altogether a tedious voyage : we had bad weather continually, and experienced three severe storms ; so that we were glad to land in England. Soon after my arrival there, I consulted the late Surgeon W. Ferguson, of King's College, London, Alexander Shaw, of the Middlesex Hospital, and the late famous Aurist, Mr. Toyubee, about my hearing ; but the benefit I derived from the advice of these gentlemen was only temporary. As soon as I had made arrangements for placing my children in a good school, I turned my attention to scientific subjects.

I took to England with me a small Swamy bull ; and on my arrival in October 1859, I presented the bull to the Zoological Society of London, and received the thanks of the Society for the same. I also received the thanks of the following Institutions for contributions to their Museums :—

(1) King's College, London, for exotic fruits and fossils, and vegetable products of India :

(2) the Science and Art Department, South Kensington, for Models of Indian fruits :

(3) the Linnæan Society, for dried specimens of Ferns, Lycopodia, mosses, &c., from the neighbourhood of Madras ; also for skeletons of the leaves of *Ficus Religiosa*, and twenty-four beautifully colored drawings on talc of the birds of Southern India :

(4) the Crystal Palace, for twenty-nine specimens of miscellaneous articles, comprising models of natives of South India, Hindoo deities, ornaments, &c., &c.:

(5) the Veterinary (Dick's) College of Edinburgh, for a number of Natural History specimens:

(6) the Dental College, for a "munificent donation" of a collection of Natural History and comparative Anatomy specimens:

(7) the British Museum, for five specimens of reptiles, and a series of shells (crustacea) from India, also various Indian fruits and seeds:

(8) the Royal College of Surgeons, for various anatomical specimens.

I was elected a Fellow of the Linnæan Society on the 15th of March 1860, and a Fellow of the Zoological Society on the 5th July of the same year. At this time I was recommended by Professors Ferguson and Woods, of King's College, to go up for the examination for the Fellowship of the College of Surgeons of England; but, on applying, I was disappointed to learn that the rules would not admit of my doing so. I was admitted a member of the College of Dentists on the 17th April 1860;—and a Licentiate of the Royal College of Surgeons in Dentistry in 1860;—and I received the Diploma of Veterinary Surgeon from Dick's Veterinary College, Edinburgh, on the 25th April 1860.

On the 6th June 1860, I married my second wife, Ellen Julia Annie Blyth, daughter of

the late A. Blyth, M.R.C.S., Surgeon of Her Majesty's Hospital ship *Unit*, lying off Woolwich, Kent, and Ellen his wife, daughter of Thomas Meredith, Esquire, of Acton-Beauchamp, Worcestershire.*

As my leave was coming to an end, I applied for and obtained medical charge of the Troop ship *Clarence*, one of Green's vessels, which was taking out a Captain and two Lieutenants, and four hundred recruits and some half-a-dozen women and children. A large number of first class passengers also were on board. Our voyage to Madras was a rapid and pleasant one.

On our arrival at Madras, I had to proceed to Arcot, to attend a Committee Meeting held there on the recruits, and to give up my medical charge of them. And a few days after, I proceeded to resume my civil appointment at Chingleput. My medical duties were never heavy at this station; but I had several good surgical cases, two of which deserve special mention here; viz.: (1) a ligature of the common carotid, in a prisoner, for aneurism of the internal carotid, which I successfully

* The marriage was performed at St. George's, Bloomsbury, London. The lady was in her seventeenth year when she was married; and she died at Kilpauk in Madras in 1865, having borne one daughter, who lived very nearly sixteen years, and died in London in 1878.

treated ; and (2) a resection of the knee-joint in a cultivator's daughter. Descriptions of these cases, and of many others, besides other papers of mine on medical subjects, were published, during my residence at Chingleput, in the *Indian Annals of Medical Science*, and in the *Madras Quarterly Journal of Medicine*. I also frequently wrote at this time to the *Madras newspapers*, giving information on various subjects.

During the civil war among the (dis) United States of America, the blockade of the ports of the Confederate States by the navy of the Northerners cut off the supply of cotton which the manufacturing towns of England used to receive from the Southern States. During the "Cotton Famine" that ensued, Indian cotton was in great demand and commanded high prices. But Indian cotton being short in staple and otherwise poor compared with American, Sea Island and Egyptian cottons, it became very important indeed to improve the cultivation of cotton in India and its preparation for the English market. The Agri-Horticultural Society of India therefore offered a prize of Rupees 1,000 and a gold medal for the best essay on Cotton Cultivated in India from Foreign Seeds. I turned my attention to the subject, and ulti-

mately won the prize, and did whatever else I could to further their objects.

My essay was not the work of a theorist ; nor had I the opportunity to be a mere observer of other men's efforts. I myself cultivated various foreign cottons in Chingleput ; and I submitted cotton seed of the different varieties which I had grown, to Government ; and their order thereon, 30th May 1862, No. 1,204, contained the following words :—

“ The Board of Revenue are authorized to purchase and distribute the cotton seed offered by Dr. Shortt, consulting the Accountant-General as to the item in the Budget from which the sum should be drawn.

2. The Government take this opportunity of recording their appreciation of Dr. Shortt's exertions to improve the cultivation of cotton.”

I also submitted samples of these cottons to the Madras Chamber of Commerce ; and I sent several species of the exotic cottons which I had grown at Chingleput, to the Cotton Supply Association, Manchester. From the latter I received the following reply :—

“ COTTON SUPPLY ASSOCIATION, MANCHESTER,
1st August 1862.

I have the pleasure to forward you the enclosed copy of a resolution passed at the last meeting of the Committee of this Association ; also the gold medal of the Association.

(Signed) S. O. SUTTON,

Interim-Secretary.”

“Extracts of Minutes of Proceedings at a Meeting of the Executive Committee of the Cotton Supply Association, July 29th, 1862 :—

“It was unanimously *resolved* that the cordial thanks of this Committee be presented to Dr. Shortt, of Chingleput, Madras, for the gratifying proof of his interest in the cause of the Association afforded by his letter of May 30th, and the very superior samples of cotton accompanying it; and the Secretary is hereby instructed to forward to Dr. Shortt, along with a copy of this resolution, one of the Society’s gold medals, which the Committee request him to accept as a mark of the high estimation in which they hold his efforts to promote the growth of improved cotton in India.”

In the latter part of the year 1862, I translated my Indigo Prize-Essay into Tamil and Hindustani for private distribution. The Secretary of the Board of Revenue, in his letter, No. 7,973, dated 6th December 1862, wrote as follows :—

“I am directed by the Board of Revenue to convey to you their thanks for the copies of your Prize-Essay on Indigo Cultivation, with Tamil and Hindustani translations, which will be placed in the Library.”

My hand-book on Coffee-planting was published at this time : and as it is always gratifying to an author to find that his work has proved useful, it gave me much pleasure to receive the following note regarding this book from a practical coffee-planter :—

“General Ottley, who was lately at Hassan and has since returned to his plantation, had much pleasure in

alluding to the labours which have earned you a name and position that shall not easily be lost on the world. Meanwhile Mr. Orr, a planter in this neighbourhood, has kindly favoured me with a perusal of your edifying hand-book on coffee, which seems a general reference book to many engaged in planting at Munzerabad.

(Signed) GEORGE SHUNKER.

3rd February 1863."

In March 1863, I submitted a report to the Secretary of the Board of Revenue, accompanied by samples of flax, straw, fibre, seed, and refuse fibre, prepared and grown by me at Chingleput. The Board directed the same to be submitted to Government, and stated that they "were much obliged to Dr. Shortt for his communication."

On the 20th May 1863, I submitted a report on the cultivation of the imphee seed, and obtained the thanks of the Board of Revenue for the same.

The exportation to England of nearly all the cotton procurable in India enriched indeed the cotton growers; but it threw the weavers of this country out of work; and because of the distress which prevailed among the latter, on the 10th December 1863 the acting Chairman of the Madras Chamber of Commerce, the

Honorable R. O. Campbell, wrote to me as follows :—

“ I am requested to inform you that at the last meeting of the Chamber of Commerce it was determined to address you on the subject of the distress prevailing among the weavers of Conjeveram and other towns in your neighbourhood; and to solicit on their behalf the benefit of your assistance in administering the funds which may be at the disposal of the Chamber for their relief. The acting Collector of Madras has kindly placed the Chamber in possession of some valuable information as to the existing distress, and has suggested that some assistance be given to the Dispensary which was lately established by you at Conjeveram. The Chamber has no means of forming an opinion as to the amount of aid that is required by that Institution; and I beg you will favour us with some particulars of its resources, and the extent of the claims upon it, in order that members may consider what sum out of the Relief Fund should be appropriated to the Dispensary. With regard to the want of employment, and the absolute want of the necessaries of life, by the weavers arising therefrom, I am directed to suggest to you the great desirability of associating with yourself a native gentleman to report upon the best mode of providing relief to the people; and at the same time, the Chamber would consider it a public advantage if you would take the necessary steps for the formation of a Relief Committee for the purchase of food, &c. A sum amounting to Rs. 80,000 has been spontaneously subscribed by some munificent Parsee gentlemen in Bombay for the benefit of the weavers of this Presidency; and authority has been sent by the Local Treasurers to Messrs. Arbuthnot and Co. to draw for that sum immediately it may be required.

As Mr. Banbury's letter, already alluded to, has satisfied the Chamber that some pecuniary aid is immediately called for on account of the Conjeveram weavers, you are authorized to draw upon Messrs. Arbuthnot & Co. for Rs. 10,000, and to invest that sum in the most favourable manner in the purchase of food for distribution among the most necessitous. The Chamber feels that it may assure itself of the aid of your practical experience and local knowledge in administering relief in a judicious manner; and it trusts that you will, as early as is convenient to you, report on the actual extent of the distress and the best means in your opinion for diverting the industry of the weavers into new channels.

(Signed) W. H. CRAKE,

Chairman."

Upon my Report being submitted to the Chamber, I received from them the following communication :—

"With very considerable interest the members of the Madras Chamber of Commerce have read your Report on the condition of the cotton weavers of Conjeveram and its vicinity, and the proposals that you and Mr. P. P. Hutchins have made for ameliorating the distress; and in acknowledging receipt of your letter, dated the 5th ultimo, and its several enclosures, I am desirous to express to you the thanks of the Chamber for your cordial co-operation in dispensing the funds which have been so munificently subscribed in Bombay for the benefit of the distressed weavers of this Presidency."

When affairs mended somewhat, I submitted a further report upon the improved condition of the weavers of Conjeveram, to the Madras

Chamber of Commerce, and received the following letter from their Secretary, which finds its natural place here, although in order of time it should come later on :—

“MADRAS, 16th September 1864.

I am directed to acknowledge, with many thanks, your report to the Chamber, dated 1st instant, on the present condition of the cotton weavers of Chingleput and Conjeveram; and to express the very great satisfaction with which the Chamber have learnt that, not only has the distress caused by the cotton famine disappeared, but that the weavers have generally resumed active and unusually profitable employment at their looms. The Chamber were always sanguine that the evil would work out its own remedy, and that the native weavers of India would discover, after the subsidence of the panic caused among them by the extraordinary rise in the value of cotton, that their trade was not ruined, nor their market destroyed. The Chamber and indeed the public at large, are much indebted to you for the interest you have taken in promoting the well-being of the weavers in your neighbourhood.

(Signed) CHARLES A. LAWSON.”

I had now been a member of the Anthropological Society of London for some years; and on the 3rd November 1863, I was appointed Local Secretary to this Society for India.

To those who knew the Chief Magistrate of Madras of quarter of a century ago, with his masterful individuality of character, which gave him the unquestioned leadership of the class to

which he belonged, it will be no surprise when I express the gratification I felt on receiving the following letter from him :—

“MADRAS TOWN POLICE COURT,
14th December 1863.

I heartily congratulate you on your present position. It is at all times a source of gratification to me to find members of our community exhibiting such talent and industry as yourself. By perseverance in your laudable course of relieving the sufferings of humanity in their most trying forms, and by developing the staple articles of commerce, you are conferring infinite benefit upon the people and country. I sincerely trust you may be long spared to persevere in the works of the good Samaritan.

(Signed) T. G. CLARKE,

Chief Magistrate.”

In their proceedings, dated 15th January 1864, the Madras Government “acknowledge with pleasure Dr. Shortt’s laudable exertions for improving the cotton cultivation of Chingleput, &c.”

In February 1864, I received the Government prize of Rupees 50 from the Central Committee of the Bengal Agricultural Exhibition for aloë-fibre, and honorable mention for cotton exhibited by me.

The discovery and preparation of new fibres has long been a subject of interest to Indian economists : and I have myself for many years

paid attention to this matter. In May 1864, I sent some of these fibres to Dr. Alexander Hunter for the Exhibition about to be held at Trevandrum ; and the two following letters relate to this circumstance :—

“MADRAS, 10th May 1864.

Thanks for the bundles of fibres. They are very nicely prepared, and as white as need be for most manufacturing purposes. I will take them with me to Travancore, and will get you the prize, I hope. In the meantime, I should like to know if any of these fibres could be prepared in the Chingleput District on a sufficiently large scale for manufacturing purposes.

(Signed) A. HUNTER.”

The result is annexed in the following letter:—

“MADRAS, 28th July 1864.

I have the pleasure to enclose an order on Messrs. Binny and Co. for Rs. 30, as a prize awarded by His Highness the Rajah of Travancore for the best collection of fibres. His Highness was much pleased with the fibres, which were much better than any they had been able to prepare in Travancore.

(Signed) ALEXANDER HUNTER.”

The following letter also belongs to this period :—

“KILPAUK, MADRAS, 30th May 1864.

As the writer of the letter signed W. F. H., which recently appeared in the *Athenæum and Daily News*, I beg to express my warm thanks for your exceedingly valuable letter in this morning's issue of that paper, with reference to the black sand of Pulicat. ‘*Palman qui*

meruit ferat.' Unscientific myself, I am most glad that my poor communication has resulted in a contribution containing so much sound information.

(Signed) WALTER F. HOOPER."

Shortly before this time, when I published my book on Coffee-planting, I sent a copy of it to Dr. E. Balfour; and the following letter has reference to that circumstance :—

"BELLARY, *June* 1864.

I thank you much for your most useful book on Coffee-planting in Southern India, which you have so kindly sent to me. I have been long in replying to its receipt; but it came to hand at a time of sorrow, and when there was no pleasure. I hope you will find your useful labours return to you again. * * * * * I have been much pleased by your account of the Yanadies which has appeared in the papers, and have added from it to what I wrote on them in 1862. With kind regards,

(Signed) E. BALFOUR."

With regard to the 'account' here referred to, I received the following letter :—

"I am much vexed that you should have had to ask for copies of your interesting report on the Yanadies. I fully intended that they should have been sent to you as soon as printed; but unfortunately in the hurry of business the matter escaped my recollection. I have the pleasure of now sending twelve copies.

(Signed) J. D. SIM."

In June 1864, I drew up a Report on the Rot in Sheep, prevalent in the District of Chingleput, and submitted it through the Officiating

Principal Inspector-General, Medical Department, to the Chief Secretary to Government. With reference to that Report, the Government, in their Order, 13th July 1864, No. 1,226, para. 2, state that they are much obliged to Dr. Shortt.

About this time I had the pleasure to send some contributions to the Museum of the Madras Medical College, which were acknowledged in the following letter from the Principal of the College :—

“I have the honor to acknowledge with thanks the receipt of the specimens of Natural History and Botany which you have had the kindness to present to the Museum of the Medical College; as well as of an English Cabinet of Mineralogical specimens as detailed in your letter to my address, dated 3rd September 1864.

(Signed) GEORGE SMITH, M.D.,

Principal.”

The following is one of a number of communications which I have received during many years past. Replying to these requests for information upon a great variety of subjects, has been one of the most pleasing occupations of my leisure hours.

“SECUNDERABAD, 18th November 1864.

I have a friend in Australia who is losing a great number of sheep and cattle from some disease called “Fluke.” He has seen in some Botanical work that

"Prango," or some such plant, is a cure for it. I have, in connexion with Dr. Williams of my Regiment, looked for it in two or three books, but have been unsuccessful in finding any mention of it. I have been recommended to put myself in communication with you. I must apologize to you for giving you trouble in the matter, but shall be greatly obliged if you can give me any information on the subject. I enclose you a small account of the plant, which kindly return to me. If you know where I could procure any seeds, kindly let me know. Again, I ask pardon for the trouble.

(Signed) R. COX,

Captain, 38th M. N. I."

In 1865, January 5th, I was appointed Superintendent-General of Vaccination, and had to move into Madras, where my Head Quarters were to be established for the future. It was a new appointment, and I had to reorganize the Department, which consisted of over a hundred Vaccinators scattered over most parts of the Presidency, some of whom were old and decrepit men, and others were totally untrustworthy. I had to visit each collectorate successively, and to select and appoint Vaccinators for the circle. At first I was able to accomplish the tour of these visits in the course of a year; but subsequently only once in two years. Instead of interrupting the narrative by introducing here

the references to my work in this Department contained in the Annual Reports to Government of the Inspector-General, Medical Department, together with the orders of Government thereon, during the succession of years in which I held this appointment, I will form a separate appendix of them. (See Appendix A, page 117.)

On the 11th March of this year, I delivered a lecture on Vaccination at the Memorial Hall before a large audience presided over by the Honorable R. Ellis.

I re-commenced my travels in the same month by visiting the Malabar District. I afterwards visited sixteen out of the nineteen districts of the Presidency, travelling over 4,000 miles of ground during the year. I introduced at this time the substitution of needles for lancets for vaccination purposes. The Vaccine lymph in use was carefully examined, and an interchange between several districts established. I also insisted that six punctures should be invariably made instead of four, which had been the rule before.

I made a collection of Indian Varieties of Fruit and Vegetables at this time for the Kensington Exhibition ; and the following letter

from Dr. Alexander Hunter relates to that collection :—

“AGRI-HORTICULTURAL SOCIETY’S GARDENS,
MADRAS, 30th October 1865.

I have just heard from Mr. Hudleston that all your contributions to the Kensington Exhibition were dispatched by steamer on Saturday last. We thought it better to keep them all together and send them at once, for fear of accidents. I showed your book of drawings to a number of people, and they were much pleased with the collection, and thought it very complete.”

My lecture on Vaccination having been published at this time, I received the following letter relating to it from His Highness the Maha Rajah of Vizianagram, dated Calcutta, 24th February 1866 :—

“I have received your letter of the 2nd instant with a copy of your lecture on Vaccination. I have read the lecture with much interest. I will gladly defray the expenses of its Telugu edition; and hope you will be good enough to cause the gratuitous distribution of the copies in the Telugu Districts through your Department, and in the District of Vizagapatam through Mr. Carmichael, the Governor’s Agent.”

During my tours I collected a number of implements used by natives for separating cotton fibre from the seed. The natives preferred them to the saw gins imported from England; for the latter injured the fibre. In hopes that it might lead to some improve-

ment in the implements used in the country, I sent the collection to the Board of Revenue, and received the following acknowledgment of the gift:—

“Proceedings of the Board of Revenue, dated 23rd March 1866.

Cotton gins used by Natives.

The Board are much obliged to Dr. Shortt for these specimens, which will be forwarded to the Curator of the Government Museum for deposit there.

(A true copy and Extract.)

(Signed) R. A. DALYELL,
for Secretary.”

In May 1866, I wrote an elaborate account of some forms of cattle disease which I found prevalent on the Shervaroy Hills, and, through the Principal Inspector-General, Medical Department, submitted the same to Government; who recorded the following words in their Order thereon, 1st June 1866, No. 1,347:—

“The Officiating Inspector-General will convey the acknowledgments of Government to Dr. Shortt for his very valuable report, which will be communicated to Mr. Thacker and laid on the Editors’ table.

2. The Governor in Council trusts Dr. Shortt’s example will be followed by other Medical officers as opportunities offer.

(Signed) J. D. SIM,
Secretary to Government.”

The following letter relates to a paper on Odontology in India which I contributed to the Odontological Society of Great Britain :—

“ 14, GOWER STREET, BEDFORD SQUARE,
5th December 1866.

I am requested by the Council of the Odontological Society of Great Britain to acknowledge the receipt of your valuable paper, and to inform you that it was read at the November meeting of the Society. Their unanimous thanks were awarded to you. The Society will feel much indebted to you for a record of some interesting case or cases you may meet with in India.

(Signed) THOMAS RUDERWOOD,
Hony. Foreign Secretary.”

At this time the subject of the cultivation of coffee under shade was being largely discussed ; and from the circumstance of my book on Coffee-planting having been for some time in the hands of the public, it was naturally expected that I should contribute something to this discussion. The following communication relates to a letter in which I expressed my views upon this subject :—

“ AGRI-HORTICULTURAL SOCIETY'S GARDENS,
MADRAS, 20th January 1867.

I am desired by the Committee of this Society to convey to you their thanks for your very interesting letter of the 5th ultimo on the cultivation of coffee under shade, and other matters. Let me also assure you that I shall be glad at all times to receive communications from you on any subjects coming within the sphere of this Society.

(Signed) J. B. BIDIE, M.B.”

The following letter from the late Rev. W. Taylor, well-known in Madras at the time as an antiquarian scholar, relates to a paper of mine on the Todas, an interesting aboriginal class of people on the Nilgherry Hills:—

“KILPAUK, 9th April 1867.

I have read your paper on the Todas with attention: and I quite agree with you as to their lowland origin, not foreign. In the *Nilgherry Excelsior* I wrote an article to that effect some time since. I have seen the Toga worn by the Telugu Pariars; and I have also seen a photograph of a Toda family. I at first mistook these for a family at Mavalur Coopum. Fanciful people must have something Grecian, Roman or Scythian. Your paper is characterised by sound common sense. The Todas speak what was once the common language of Southern India: the Tamil, Telugu and Canarese are refinements. You may discard the five sons of Pandu. Polyandry is common everywhere, and certainly among Sudras, but not avowedly. Pandu was a proper name: but the Pandiya Kings were old (*ancient*) Kings. These once ruled on a part of the Hills, but I do not believe that the five Pandavas were ever in India. The one-year-in-turn system was different from any other system. Nothing is more common than to transfer the scenes of the *Maha-Bharatam* to India: but the whole is romance, not history. If you publish, favour me with a copy and oblige

(Signed) W. TAYLOR.”

The following letter is from the same:—

“KILPAUK, 11th September 1867.

The name, I believe, is correctly spelled Kanya Kôvil (Virgin-Church), and is synonymous with Aiyânâr Kôvil,

the name given to me on enquiry. In the Kûrma Avatâram, Vishnu assumed the form of a virgin (Môhini), and cheated the Asuras out of the *Amritam*; the Saivas add that Siva had a son by her, named in Sanskrit *Hari-Hara*, but in the South Tamil country called Aiyânâr. The pottery horses, &c., &c., are votive offerings of women to procure children, I was told on asking. Now that you are here, I shall give you an early call, for I wish a better acquaintance.

(Signed) W. TAYLOR."

To a matter of a more practical nature refer the following

"Proceedings of the Board of Revenue, dated 2nd May 1867, conveying the thanks of the Board to Dr. Shortt for his obliging report on the use of wild cockscomb as a food for cattle in this country.

Resolved that the thanks of the Board be conveyed to Dr. Shortt for his obliging communication.

(Signed) R. A. DALYELL,

Secretary."

The next letter shews how men with tastes and pursuits in common help one another :—

"WALTAIR, 23rd May 1867.

Herewith I send you a few pressed flowers of the milk hedge, with a few of the fruits (half size). I hope they will reach you safely. I first tried to press stems and flowers together; but the flowers did not press, they only withered; so I had to gather more flowers. When I wanted the second set, I could scarcely find any; but now some hedges are covered with them, and some few bushes are a mass of

fruits. On most bushes here the flowers perish fruitlessly. Thanks for naming the *Martynia diandria*. But there are still two or three plants which baffled us. I hope they will be in flower when you next come.

(Signed) T. G. THOMPSON."

In the year 1865, I commenced, and for many of the following years conducted, a series of experiments in the hope of discovering an antidote for the poison of the cobra. I offered to give a purse of (500) five hundred rupees to any one who would satisfactorily prove to me the cure of three snake-bitten animals. Upon this, His Highness the Maha Rajah of Travancore supplemented my offer by a purse of (1,000) one thousand rupees; and His Highness Prince Rama Vurmah, the First Prince of Travancore, offered a purse of (250) two hundred and fifty rupees to be added to the above sums, making the prize in all one of (1,750) one thousand seven hundred and fifty rupees. The following official letter of the Dewan of Travancore announced the offer of these philanthropic rewards:—

"*Vide* Correspondence.

HUZZUR CUTCHERRY, TREVANDRUM,
14th November 1867.

The Government of His Highness the Maha Rajah have taken much interest in the experiments which you have set on foot with a view to discover an antidote to the venom of the cobra. Such an antidote would be a great blessing to

the people of this country, where snakes abound. I am glad to see that the reward you have offered has induced many persons to bring remedies to the test: and though they have failed, still we may hope that the offer of a larger reward may lead to the disclosure of the secret, if there be any at all, by whomsoever it may be possessed, or may set competent persons to make experiments in different parts of India; and that success may be finally achieved.

In this hope His Highness the Maha Rajah has been pleased to direct me to ask you to be so good as to announce the offer by His Highness of a reward of (1,000) one thousand rupees, under such conditions as you may think proper to annex, to any one who will produce a remedy and satisfy you that it is effectual against snake-bites. When the proper time comes I shall be prepared, on hearing from you, to pay the amount of the reward. Sincerely wishing that your labours may be rewarded with the honor of giving to the world the desired antidote,

(Signed) T. MADAVA RAO,

Dewan."

The following are some of the acknowledgments I received in the year 1868 of contributions made by me in different directions to help the progress or diffusion of useful knowledge:—

“ ANTHROPOLOGICAL SOCIETY OF LONDON,

4, ST. MARTIN'S PLACE, W. C.,

27th February 1868.

Not having been at all well for some time, I have not been able to reply to your letter sooner. I have given instructions for the particulars contained therein to be attended to, and trust no further irregularities will occur.

I am much obliged for what you have done, and shall always look upon you as being our most valuable assistant in India.

(Signed) JAMES HUNT,
*President of the Anthropological
 Society of London."*

"INDIAN MUSEUM, August 4th, 1868.

. . . . Being doubtful as to your having received my letter (which I wrote to you in May and addressed to the P. & O. Steamer at Marseilles) of the 24th May last, in which I expressed my very best thanks for the specimens you so kindly sent me. They will prove of great use to me, and I trust that you will also kindly remember me in future. My *particular* wants are, I think, pretty well known to you. I subsequently received the box which you brought from Dr. Francis Day, but not till after fruitless application to Messrs. Baring, and direct enquiry of the P. & O. Company's Agent at Southampton.

(Signed) FREDERIC MOORE."

"AGRI-HORTICULTURAL SOCIETY'S GARDENS,
 MADRAS, 14th September 1868.

I am directed by the Committee of the Society to convey to you their best thanks for your kindness in sending for Exhibition at their last Meeting an aquarium and specimens of a live Borer at work in Orange-wood. Both were looked at with much interest.

(Signed) GEORGE BIDIE, M.E.,
Hony. Secretary."

Here I must insert communications from the Board of Revenue in Madras and from the

Government of India regarding my endeavours to increase the attention paid to the indigenous silks of India :—

Proceedings of the Board of Revenue, Madras, 31st July 1871, No. 3,188. *Sericulture*.—Correspondence regarding the introduction of improved Sericulture into the Madras Presidency, submitted to Government with remarks ; para. 45 :—

“The Board have to thank Dr. Shortt for his very interesting report on the Tussock silk-worm, which they suggest should be laid on the Editors’ table.

(Signed) F. BRANDT,

Acting Sub-Secretary.”

“SIMLA, dated 30th August 1872.

I am directed to acknowledge with thanks the receipt of your pamphlet entitled : “A brief account of the Tussock silk-worm, accompanied by drawings of the insect.”

(Signed) J. GEOGHEGAN,

Under-Secy. to the Govt. of India.”

Adverting to my experiments upon the poison of the cobra-capella, I received the following letter from the recently deceased Maha Rajah of Travancore, who had not at that time acceded to the throne :—

“TREVANDRUM, 31st January 1870.

I am in receipt of your letter of the 21st instant and its enclosures. I am much gratified to learn that in the experiments on cobra-poison conducted by you, the use of Liquor Potassæ has been so successful. Of course my offer of 250 Rupees is still open, as a supplement to that

of Rupees 1,000 by His Highness the Maha Rajah. Its award will be determined with that of the larger sum. Hoping that this will find you in good health, and with best regards,

(Signed) RAMA VURMA,

First Prince of Travancore."

These offers attracted attention in nearly every part of the world ; and not only from various parts of India, but from distant countries, I received numerous packets of antidotes, each of which I tested, besides attending to numerous parties who came forward personally before me to have their antidotes tried. In all I have, at much personal risk* and expense, tested over 1,500 such antidotes ; and they have all ended unsuccessfully.

In this connection I may here introduce the following letters :—

“SIMLA, 16th July 1870.

I am directed to forward the accompanying extract from a letter from Mr. Otho Alexander, of Cephalonia, together

* Dr. Shortt's courage, coolness and dexterity in handling the most deadly snakes were matters of surprise and admiration to all who saw his experiments, or who attended his lectures, illustrated by living specimens. He himself was never bitten ; but on one occasion, a native groom, whom he had trained to help him, was bitten by a cobra ; when the Doctor, with equal courage and kindness, sucked the poison out of the wound. The act was not wholly without danger : had there, at the time of the operation, been any small sore, cut or scratch any where in the Doctor's mouth or on his lips or gums, the result must have been disastrous. As it was, the mouth became inflamed from the poison, and the Doctor was out of sorts for some days after sucking the wound.

with a small quantity of the mixture and ointment therein alluded to for the cure of snake-bites; and to state that the Governor-General in Council will feel much obliged if you will be so good as to institute experiments with them to test their efficiency, and report the result for the information of His Excellency in Council.

(Signed) W. M. SOUTHAR,

Offg. Under-Secy. to the Govt. of India."

The extract is long and need not be fully inserted here. The above proposed remedy was a powder, the ingredients of which were kept secret, and an equally secret "water" to be taken internally, together with an ointment made of *Liquor Ammoniae* and Venetian Treacle, for external application to the wound and the adjacent parts by heavy friction.

As to all the other proposed remedies, so to this one also, I gave a fair trial, but with no successful result.

"FORT WILLIAM, 17th November 1870.

I am directed to acknowledge the receipt of your letters noted on the margin; and in reply to Home Department, Public, No. 200, of 2nd September 1870, No. 1564 of 10th Oct. 1870. thank you for the trouble you have taken in testing the alleged efficiency of the antidote to snake-poison sent by Mr. Otho Alexander of Cephalonia. The result of the experiments conducted by you has been communicated to Mr. Alexander, and will be published in the Supplement to the *Gazette of India*.

(Signed) E. C. BAYLEY."

It would have been strange if, with all my experiments with snakes and with snake-poison and its alleged antidotes, I had failed to communicate with Sir Joseph Fayrer, the Ophiologist of India. He wrote :—

“CALCUTTA, *November 20th*, 1870.

I have to thank you again for two drawings of the *Hypnale Nepa*, one of which I intend to copy with your permission. It is really very kind of you to send me these; and I assure you I highly appreciate your courtesy.

(Signed) J. FAYRER.”

Later on Sir Joseph wrote the following :—

“E. I. U. S. CLUB,
14, ST. JAMES’ SQUARE, LONDON.

Will you do me the favour of accepting a copy of my book on the poisonous snakes of India? The Government of India have published the work, and have allowed me to distribute some copies; I beg to offer you one, and with it to repeat my thanks for your kindness in procuring me the specimens you sent me.

(Signed) J. FAYRER.”

In Australia also—in Melbourne in particular—learned men were bending their energies towards the discovery of antidotes for snake-poison. The following, in which the results of their labours were referred to me, point to two such experimentists :—

“Read letter from Secretary to Government of India, Home Department, Fort St. George, dated Simla, 27th

June 1871, No. 3,150, on a pamphlet by Professor Halford, of the Melbourne University. Order thereon, 3rd August 1871, No. 1,170 :—Ordered that 23 copies of the Pamphlet referred to be forwarded to the Acting Inspector-General, Indian Medical Department, for distribution; and that the opinions of Dr. Shortt and other Medical officers who have paid attention to the treatment of snake-bite may be obtained for submission to the Government of India.

(True Extract.)

(Signed) A. D. C. SCOTT,

Captain, R.E.

Government of Fort St. George, for information.

(Signed) H. WELLESLEY,

Offg. Under-Secy. to the Govt. of India."

Communicating letters from the Government of India forwarding papers relative to an antidote for snake-bite discovered by Mr. D. Winter of Melbourne.

From the Officiating Under-Secretary to the Government of India, Home Department, (Public), to D. Winter, Esq., Melbourne, dated Fort William, January 1873, No. 217, para. 2:—

"In reply I am to state that many such specifics have been tested and found entirely to fail with the poison of Indian snakes. You can however communicate, through the Government of Fort St. George, with Dr. Shortt, who is engaged in the Madras Presidency in making experiments in alleged remedies for snake-bites; and if your specific is pronounced by Dr. Shortt after a full trial to be perfectly effectual, the Government of India will be prepared to consider the question of rewarding you.

No. 218. Copy forwarded to the Government of Fort St. George for information.

(Signed) H. WELLESLEY,

Offg. Under-Secy. to the Govt. of India.

No. 83. Order thereon, 20th January 1873, No. 94.

Communicated to Dr. Shortt through the Inspector-General, Indian Medical Department.

(True Extract.)

(Signed) W. HUDLESTON."

The reports of my snake-experiments had by this time extended to Australia : and the following letter contains some interesting remarks upon them, and on some counterpart experiments which had been reported in the Australian newspapers :—

" MONDAY, April 14th, 1873.

I send you the Australian paper you have been so kind as to lend me. It is a curious illustration of the admixture of local partisanship with a scientific question. Halford has had to change the basis of his theory two or three times; and if I understand him aright, he now proposes Ammonia injection, only as a means of keeping up the heart's action and thus keeping the patient alive till the effects of the poison cease. As for the acid theory, it is entirely neutralized by the fact that Prussic acid is equally deadly when neutralized; and that many poisons which are not acid seem to kill in precisely the same way, *e.g.*, Aconite:—neither does he seem to realize your conception of the effects of Liquor Potassæ. I propose to send you in a day or so a gossiping letter which I want to send home to the *Medical Times and Gazette*, giving a little account of the snake-experiments of yours

which I witnessed. I am going to-day to get your paper on Vaccination; and am charmed at the idea of passing the virus through the cow periodically. So far as I am concerned, I am an idle man, alas! and so pray don't inconvenience yourself to gratify my curiosity.

(Signed) R. DRUITT."

About this time the Government of Madras, acting on the sound principle that prevention is better than cure—especially when every alleged cure hitherto had proved inefficacious—gave increased attention to the slaughter of venomous snakes. The following refer to my endeavours to help them :—

"Proceedings of the Madras Government, Revenue Department, 22nd September 1871, No. 294. Order thereon, No. 1,654, communicated to the Board of Revenue; who will request Dr. Shortt to furnish them with a nominal list (in English and the Vernacular) of the species of snakes for killing which, as to venomous beasts, rewards should be offered and with the Districts in which the two years' trial sanctioned by the Government of India can best be made.

* * * * *

(True Extract.)

(Signed) W. HUDLESTON."

"Board of Revenue, Madras. Proceedings 30th April 1872, No. 686. *Snakes*.

Letter from Dr. Shortt, furnishing information regarding certain kinds of snakes in Tanjore, communicated to the Collector of that District.

All Collectors are requested to forward complete lists of snakes in their Districts which are reputed to be venom-

ous, giving their names in the Vernacular and English, as also a description of them. The Board are indebted to Dr. Shortt. His letter will be communicated to the Collector of Tanjore."

I myself, believing that attention to the subject would be more lively in those most likely to help in the good work, and their interest in it more intelligent, if information about snakes were illustrated by producing living specimens, offered to deliver lectures to the students of the Madras Medical College :—

"Read the following letter from the Inspector-General, Indian Medical Department, to the Acting Secretary to Government, dated Fort St. George, 30th April 1872, No. 134, para. 4 :—

I have spoken to Surgeon Shortt, M.D., to whom the Board of Revenue lately referred for information regarding snakes, and he has kindly offered to give a few lectures to the students of the Medical College and describe the poisonous snakes of the country.

5. I have the honor to submit Dr. Shortt's offer to Government, and beg to recommend its acceptance; because Medical students after quitting College are spread over the length and breadth of the land, could be referred to if necessary, and would aid in diffusing correct information regarding these reptiles.

No. 35. Order thereon, 20th May 1872, No. 150 :—The Governor in Council is of opinion that Dr. Shortt's offer to lecture on this subject should be accepted. It should be considered and reported whether the lecture with illustrations, should not be afterwards printed, perhaps translated also into the principal languages, in which

case the Government would be prepared to take a certain number of copies for distribution in the Provinces.

(True Extract.)

(Signed) R. S. ELLIS,

Chief Secretary."

"Secretary, Madras Agricultural Exhibition, No. 13.

Read the following letter from the Inspector-General, Indian Medical Department, to the Secretary to Government, Fort St. George, 24th July 1872, No. 234:—

1. On receipt of the order of Government, No. 150, dated 29th May 1872, Dr. Shortt commenced collecting serpents with the object of illustrating the lectures which he was to deliver.

2. There was little time left, as I deemed it desirable that the students who were about to leave College should have the opportunity of attending the brief course: nevertheless, hastily made as the arrangements were, the attentiveness of the large audience evidenced the interest which they took in the subject, and Dr. Shortt felt gratified at witnessing their eagerness to learn all that he could tell.

3. Dr. Shortt communicated many points of information regarding the habits of this class of reptiles, new to most of his hearers; but he feels that, before putting his observations into print, they require to be re-written, and that, though his lectures are all in manuscript, he thinks that in the matter of their publication, it will be better to defer acting on the wish of Government until he can reconstruct them. I concur in this opinion; and before another year comes round, his manuscript will be ready for the press.

4. I asked the Principal of the Medical College to favour me with his opinions on the lectures delivered, and

as to the question of their renewal next year : and I beg to enclose Surgeon Chipperfield's Report, in which it will be observed mentioned that, besides the senior students, nearly all the Medical officers in Madras, both of the British service and Indian Medical Department, the Commissioner, Deputy Commissioner, and Inspectors of Police, the Magistrates, and many of the general public were present.

5. With a view to aid Dr. Shortt, I printed and distributed 200 copies of each reptile known to occur in Southern and Eastern Asia.

6. I have pleasure in mentioning that Dr. Shortt has already in anticipation retained an artist to make drawings from living snakes.

No. 14. Order thereon, 9th August 1872, No. 227.

The Inspector-General, Indian Medical Department, is requested to convey to Dr. Shortt the thanks of the Government for the lectures which he has recently given on the snakes of Southern India.

(A True Extract.)

(Signed) C. A. GALTON,

Acting Under-Secy. to Govt."

The following two letters may be left to speak for themselves :—

"Proceedings of Government, Educational Department, 9th August 1872. On snake lectures. Order thereon, 9th August 1872, No. 227.

No. 14. The Inspector-General, Indian Medical Department, is requested to convey to Dr. Shortt the thanks of Government for the lectures which he has recently given on the snakes of Southern India.

(A True Extract.)

(Signed) C. A. GALTON,

Acting Under-Secy. to Govt."

I confess to having felt gratified at the tokens of appreciation I have received from different quarters and at various times, of my efforts, however imperfect, to acquire and spread information, and to do good. This was especially the case when, in the year 1872, I had the honor of being appointed a Fellow of the University of Madras : the following letter gave me the tidings :—

“SUNDAY, 4TH.

I thought it might be agreeable to you to be elected a Fellow of the University of Madras, and I submitted your name. It is with pleasure that I write to mention that His Excellency the Governor in Council has passed your name as a Fellow of the University. With best wishes,

(Signed) E. BALFOUR.”

Next year, I was elected a Foreign Correspondent of the Anthropological Society of Paris :—

(Translated from the French.)

“SOCIÉTÉ D'ANTHROPOLOGIE DE PARIS,
PARIS, 7th July 1873.

I have the honor to tell you that at the Meeting of the Anthropological Society of the 5th of August, you were elected one of its Foreign Correspondents. Your diploma will be ready on Thursday the 7th October. Kindly tell me by whom you wish to receive it.

I have much pleasure, my dear sir, from my position as Secretary-General to receive you as a fellow member ; and I take this opportunity to present to you my personal sentiments of regard and esteem.

(Signed) PAUL BROCA.”

Early in 1874, I wrote an account of the indigenous breeds of cattle in Southern India, to compete for a prize offered by Government for the best report upon them. The following letter informed me that my paper was successful :—

“ GOVERNMENT FARM’S OFFICE,
20th April 1874.

I am directed to inform you that the prize of Rupees 100 (one hundred) has been awarded to you for your report on the indigenous kinds of cattle of the Madras Presidency. I enclose a cheque for the amount, and request that you will favour me with an acknowledgment at your early convenience.

(Signed) WILLIAM ROBERTSON.”

In the same year I submitted to Government a collection of arms and implements of the Aboriginal tribes of Southern India, which I had for some time past been making, with drawings of the whole collection ; and I received the following order thereon :—

“ Proceedings of Government, Public Department, 26th June 1874, No. 716.

The Governor in Council is much obliged to Dr. Shortt for the report submitted with his letter.

(Signed) D. F. CARMICHAEL,
Acting Chief Secretary.”

In this same year the Secretary of State for India forwarded a snake destroying machine to the Government of India, which was sent on for

trial to the Government of Madras, who passed the following order thereon, 25th March 1874, No. 353 :—

“The Governor in Council resolves that Dr. Shortt, Superintendent-General of Vaccination, be entrusted with the machine for the destruction of snakes on its arrival, and that he be requested to test it and report the result for communication to the Government of India.

(Signed) D. F. CARMICHAEL,
Acting Chief Secretary.”

The result of the trial is noticed in the following :—

“Proceedings of the Madras Government, Public Department, 13th July 1874, No. 47.

Read the following letter from Surgeon-General E. G. Balfour, to the Honorable D. F. Carmichael, Esq., Acting Secretary to Government, Fort St. George, 6th July 1874, No. 297 :—

I have the honor to submit to the Right Honorable the Governor in Council a report from Surgeon-Major Shortt, M.D., on a vermin asphyxiator which was sent to him for examination.

2. The report enters very fully into the advantages of this machine; and, as will be observed, brings an amount of information relating to the destruction of reptiles, noxious vermin, and insects, which few in India perhaps, other than Dr. Shortt, could have furnished. The simple process of destroying vermin in the ground and among plants by means of the smoke from damp straw, is practised throughout all India; and an earthen pot being all the apparatus that is needed, no one for such objects would think of purchasing an expensive instrument, as this is; but

it will be observed that Surgeon-Major Shortt writes very favourably of this instrument, as one invaluable in large establishments, such as buildings, ships, &c., for the purpose of fumigation; but he thinks the snake composition sent with the instrument worthless, and that sulphur, tobacco, chillies, wood smoke, &c., would answer the purpose better."

My own report is too long for insertion here. It was adopted by the Madras Government, who passed the following order upon it:—

"13th July 1874, No. 783:—Copy of this letter, and of the report received with it, will be forwarded to the Government of India."

The following letters are specimens of an extensive correspondence with various people who applied to me continuously for information upon subjects with which I was presumed to be acquainted:—

"JUNIOR UNITED SERVICE CLUB, LONDON,
3, SAVILLE ROW, Nov. 2nd, 1874.

A short time ago I expressed a wish to Mr. F. Day to be acquainted with some of the dyes, as used by the natives of India, whether for the beard, scalp, or eye lashes; and he at once said that I might write to you (making use of his name) as being the best authority on the subject; also, what is employed in removing any excess of hair, or in promoting its growth. Any information that you may be able to supply me with on the above points, I shall feel greatly indebted to you for. I was for some years in the Bombay Establishment, and I remember your name when doing duty myself at the Warley Dopôt.

(Signed) GEO. NAYLER."

“ ONGOLE, *September 16th*, 1876.

The Executive Committee of the American Baptist Missionary Union, Boston, U. S., wish the Medical opinion of several of the first Medical men in the Madras Presidency. The points on which they wish information are :—

1. Other things being equal, would married or unmarried men and women enjoy the better health in India ?
2. Which of the two classes named above would probably, as missionaries, endure the most hard work ?
3. Which class would probably remain longest in the country without furlough ?

I will not ask you for a lengthy letter = your *opinion*, as a medical man of great experience, is what I want. If you can find time to write me a few words I shall be very thankful.

(Signed) E. CLOUGH,

Secretary, A. B. Telugu Mission.”

Many old friends doubtless have a vivid remembrance of the author of the following letter, Colonel Kenneth Macaulay, who for several years conducted somewhat similar experiments to my own upon the poison of the cobra-capella, and had always some interesting practical or scientific investigation or other on hand :—

“ TRICHINOPOLY, *November 20th*.

All right : I shall be very happy to see you. You are just the chap I want to see. I was thinking of writing to you, to ask you when you were coming this way. I want to find out from you lots about artificial hatching ; so please, if you have any work on the subject, look it up, and find out what is the proper temperature for it. I am

groping in the dark, and have only succeeded partially, although I have been at it for some months.

(Signed) K. MACAULAY."

The following four letters relate to my snake-poison investigations :—

"LUCKNOW, *March 2nd*, 1875.

Yesterday I received 24 colored drawings of snakes, which you very kindly presented to the Lucknow Museum. Accept my best thanks for this most useful present. Kindly inform me whether these snakes all belong to Madras, and whether the series is complete, as I should like to bind them in a book, which is the best manner to preserve them. Should the twenty-four not complete your series, and should you intend to have more done, I should like to be allowed to purchase the remainder, as it would make a very useful book of reference.

Thanking you again for your kindness,

(Signed) G. BONAVIA."

"GOVERNMENT HOUSE, GUINDY PARK.

I send you a letter received by last mail, containing a supposed remedy for snake-bite. Would you kindly, if you think it worth while, make a few experiments of the proposed treatment, and let me know, for His Excellency's information, how it succeeds. Please return the letters.

(Signed) A. AWDRY."

"Thank you for your letters about the Australian cure for snake-bite. I am sorry you have found it so unsuccessful; but, such being the case, there seems no object in renewing the experiment.

(Signed) A. AWDRY."

“Monday, 28th.

I meant to have given myself the pleasure yesterday of calling to deliver this book personally, but was hindered by accident. I am very much obliged to you for the loan of it so long. I hope you will persevere in your project of publishing your own researches; and should think that the enlightened Government would help you in so doing, and contribute towards the expense of experiments. I should very much like to witness some more experiments, such as the effect of Viperine and Colubrine, respectively, on the blood,—the effect of gastric juice on the poison, whether diminishing its virulence or not,—the effect of the poison on minute forms of animal and vegetable life,—and the use of certain remedies. However, I want to draw up a little account of the proceedings of the seance of January, when you gave a reception, and of your vaccination work; and shall be glad if you will tell me whether this would be agreeable to you, and whether you would help in details. I have not till of late felt well enough to undertake anything that implied work.

This book has been lent to Mr. Sim and other grandees, in order to stimulate them to let you prove what Madras can do.

(Signed) R. DRUITT.”

The following letters have reference chiefly to some contributions which I made to various Museums in London when I last visited England :—

“ROYAL COLLEGE OF SURGEONS OF ENGLAND,
LONDON, W. E., 8th March 1875.

I am desired by the President to return you his best thanks for your donation to the Museum of this College

of two specimens of "Mycetoma" or Fungus Disease of the Foot.

(Signed) EDWARD TRIMMER,
Secretary."

"ROYAL COLLEGE OF SURGEONS OF ENGLAND,
LINCOLN'S INN FIELDS, W. E., 8th March 1875.

In forwarding the enclosed I beg to add my thanks to those of the President for the very fine specimens of Fungus Disease of the Foot, you have been so good as to send to this Museum, and which arrived quite safely last week.

(Signed) W. H. FLOWER,
Conservator."

"37, ALBANY STREET, REGENT'S PARK, May 19th.

I have just seen my friend Dr. Day at the Mansion House. He tells me the two murrels are dead. Dr. Day has asked me to be good enough to request you kindly to send the fish to my house, that I may make casts of them for my fish Museum at South Kensington. With apologies for troubling you,—I shall have great pleasure some day in showing you my Museum—

(Signed) FRANK BUCKLAND."

"28, ABINGDON ST., S. W. LONDON,
21st May 1875.

Mr. Collingwood has informed me of your arrival in London; and I hasten to say how much pleasure it will give the Anthropological Club if you would dine with them at the Pall Mall Restaurant on Tuesday next at 6 o'clock sharp, before the Evening Meeting.

(Signed) E. W. BRABROOK."

"GROSVENOR, H. GROSVENOR SQUARE, W.,
25th May 1875.

Accept, on behalf of the Pelvis Committee, my warmest thanks for your most valuable addition to our collection. I am sure the trouble and zeal you have shown will be appreciated by the Society. I am sorry your stay is so short. Could you favour me with a call some morning?

(Signed) ROBERT BURNES."

"ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN
AND IRELAND, 4, ST. MARTIN'S PLACE, W. E.,
June 9th, 1875.

Your present of a skeleton of a male Hindoo (Soodra) was announced at the Meeting held on Tuesday the 25th day of May last; and I am requested to convey to you the thanks of the Institute for your contribution to its Museum, as also your present of the Cyclopædia of India, two volumes, by Edward Balfour; and I am requested to convey to you the thanks of the Institute for your contribution to its Library.

(Signed) T. W. RUDLER,
Director."

"ZOOLOGICAL SOCIETY OF LONDON,
11, HANOVER SQUARE, LONDON, W.

I am glad to hear of your safe return, and have to thank you very much for bringing the snakes and other animals. They will be very acceptable; and we shall be glad to have the snakes. I enclose your tickets herewith.

(Signed) P. L. SCLATER."

In the month of March 1875, I submitted to the Board of Revenue my Report on the list of

snakes received from the different collectorates of the Madras Presidency, which had been sent to me for that purpose. The Board forwarded this report to Government, who passed the following order thereon :—

“8th June 1875 : The Board are authorized to produce 1,500 copies, colored, at a cost of Rs. 450, for distribution to District officers, the Medical Establishment and others, with copy of Dr. Shortt's report, which should be reprinted. Ten sets should be sent to the Government office.

2. The Native names, in the Vernaculars and in English, should be given on each copy, as well as the scientific names.

3. The thanks of Government are due to Dr. Shortt for this practically useful contribution to the discussion of this important subject.

(True Extract.)

(Signed) A. MACGREGOR,

Acting Secretary to Government.”

In the early part of this same year 1875, I published my ‘Manual of Vaccination,’ and had it translated into all the Vernacular languages of Southern India. The following letter conveyed to me the approbation of Government for this work :—

“SURGEON-GENL.'S OFFICE, FORT ST. GEORGE,
14th July 1875.

I have had the honor to bring to the notice of Government the valuable assistance, to diffuse information among the people, you had so willingly given by preparing

your Manual of Vaccination, and its translations into Tamil, Telugu, Urdu, Canarese, Malayalam and Uriya; and I have the pleasing duty, by order of His Excellency the Governor in Council, to convey to you the thanks of Government for your valuable assistance.

(Signed) EDWARD BALFOUR,
Surgeon-General, I. M. D."

"MANGALORE, 17th August 1875.

Government have ordered me to compile a Manual of this District. One sub-section deals with the physical peculiarities of different castes, tribes, &c. I remember that, when we went together to the Amindivi Islands, you mentioned to me a Society which had settled, for the purposes of the comparison of races, certain modes of measurements, weighing, &c., of specimens selected at random; and I remember that you made such observations in the case of Amindivi Islanders. I hope you will not think me troublesome if I ask you to let me know what that system of measurement, &c., is exactly, in order that I may put it into practice here; and to give me the result of your observations of the Amindivi Islanders. I would also be very thankful for any hints which you could give me as to the Mineralogy, Geology, Fauna or Flora of Canara, or the West coast,—as to the best sources of information relating to them, or as to the best manner of treating them from the point of view of a Manual, which does not aim at a purely scientific treatment, but rather at giving such information as a man but slightly skilled in such subjects would need, in order that he might turn it to account in the practical administration of the District. Hoping you will excuse the trouble I give,

(Signed) G. STOKES."

The following letters are from a well-known and enterprising Tobacco cultivator :—

“DINDIGUL, 16th September 1875.

We suffer so much loss by the depredations of the weevil, or whatever the insect is that eats holes in tobacco and cheroots, that I hope you will excuse my troubling you, as I must do, by writing now to ask you if you would let me know the name, genus, species, &c., of the insect; also how to “case” tobacco and cheroots against its attacks. I read in the papers that sulph. carb. of soda has been used in France to destroy the vine insect. You probably know the weevil I complain of: every smoker in the country does; so specimens are abundant. You will be adding a great boon to the public,—you have given them so many already,—if you could tell me how to preserve tobacco from this insect in some way that shall not hurt the taste of the tobacco, or injure the smoker.

(Signed) E. A. CAMPBELL.”

“DINDIGUL, 7th October 1875.

I am much obliged for your letter of the 21st ultimo, and have written for the copies of the Revenue Register to which you refer. The insect I refer to attacks only dry tobacco; it will not touch green or damp leaf. It is quite different from anything which attacks it in the green state. Lacs of cheroots, also tons of dry tobacco, are destroyed annually by it in India. I think it hates cold, as it does not attack the tobacco I store at Ootacamund or Kodicanal. I send you enclosed the insects,—three or four specimens of it in different states of existence.

(Signed) E. A. CAMPBELL.”

The following letters refer to some further donations of specimens made by me at this time :—

“ ROYAL COLLEGE OF SURGEONS, LONDON, W. C.,
17th February 1876.

I am desired by the President to return you his best thanks for your donation to the Museum of this College of a foot affected with Oriental Leprosy and a human skeleton.

(Signed) EDWARD TRIMMER,
Secretary.”

“ ROYAL COLLEGE OF SURGEONS, ENGLAND,
19th February 1876.

I am extremely obliged to you for your kindness in sending the specimen of leprous foot, which arrived in excellent condition. In the same box was a complete human skeleton, of which you made no mention in your letter. If, as I hope it may be, it is intended for this Museum, I should be very glad to know something about it. Though I said complete, I find on close examination, that some of the bones do not belong to the same individual. The atlas, for instance, and one of the patellæ; but until I hear from you, I will do nothing with it. I am very anxious to increase our collection of human skeletons and crania; any well-authenticated specimens of the Native races of India will be most acceptable. Perhaps you can help us, as you so kindly express your willingness to do something for the Museum. The books have been forwarded to the Obstetrical Society. With many thanks,

(Signed) W. H. FLOWER,
Conservator.”

When on my tour of inspection in the beginning of 1876, I had the pleasure of meeting the eminent scientific German traveller, Hen. F. Jagor. The following letters were received from him shortly afterwards :—

“ SALEM, 2nd March,
TRAVELLERS' BUNGALOW.

You mentioned to me, when I had the pleasure of meeting you at Palamcottah, that a certain sect or race inhabiting the Salem District buries the remains of its dead in large urns, much in the same manner as the people did, whose burial ground I had been exploring in Shermadevi. The desire to visit this curious sect, and their burial-grounds, was one of my chief reasons for coming here ; but to my great disappointment, I cannot find the notes I made at the time, nor do I recollect the name of the place ; and none of the persons I had occasion to question on the matter, knows anything about it. You were quite positive about the fact, however : if I recollect right, one of your vaccinators had been at the place and given you a full report of all the circumstances. Would you be kind enough to send me the name of the locality, as soon as possible, as I want very much to go there. After leaving Tinnevely, I stayed some time with Mr. Cusack, where I had good opportunities for investigations among the Kanikars. From there to Trevandrum. I saw Dr. Sperschneider and Rev. Mr. Mateer, who procured Polygars and Vedars for me ; then I returned to Palamcottah, made a very successful expedition to Adichanallore, in company with Mr. Stuart and the Engineers, (many burial urns were dug up

and rifled of their contents) ; and now I am here anxiously awaiting your reply. I hope this note will reach you in Madras. Have you ever met blue eyes amongst natives ? Can you give me any particulars of the skeletons you presented to Professor Virchow ?

(Signed) F. JAGOR."

"MADRAS CLUB, 15th March.

I arrived in Madras a few days ago, and heard, to my great regret, that you were not in town. I purpose leaving by the end of this week, provided I get through my packing, &c. The plaster-casts taken from your bronze figures are so fragile and partly broken, that I should like to have better copies made. Will you be kind enough, on your return to Madras, to send them once more to the School of Arts, where I shall leave the necessary instructions ? You have not yet given me the particulars concerning the skeleton. Have you ever observed blue eyes in Natives ? Are the eyes of new-born children never blue ? When will you be back ? I hope that I shall not be obliged to leave India without seeing you once more, and thanking you for your many acts of kindness to me.

(Signed) F. JAGOR."

"MADRAS CLUB, 22nd March 1876.

I have taken my passage and shall leave Madras on the 28th in the P. and O. Steamer *Poonah* ; I trust that I may have the pleasure of seeing you once before I go. You have from first to last assisted me so much, shown me so many kind attentions, and given me so much useful information, that I shall always remain deeply obliged to you. If the origin of the skulls which you expect from

Madura is known, I shall very much like to have them, and wish you would forward them to Professor R. Virchow, Charité, Berlin, through the German Consul, who will pay the expenses. I told you already that the plaster casts taken from your bronzes were quite unfit to be sent home, and that a new set of casts has to be taken, if you will be good enough to send the originals to the School of Arts. I have ordered certain camp stools, &c., for Mr. Robert Fischer, at the Government work-shop; will you see that he gets them? Pray remember me to your kind and amiable lady,* and believe me,

(Signed) F. JAGOR."

It was a great gratification to me in the middle of this year to receive the following letter from one of my oldest and best friends in my early career, and to see that in his retirement he still bore me in his kind remembrance :—

"76, PORCHESTER SQUARE, 16th June 1876.

I have much pleasure in sending you my Photograph. It will in after years remind you of one who always took, and still takes, much interest in your welfare. Wishing you every success in life, and with kind regards,

(Signed) JAMES KELLIE."

It was also a great pleasure to me at this time to receive the following letter expressing

* In September 1875 Dr. Shortt, then Surgeon-Major, married Annie Julia Henrietta, daughter of Surgeon-Major C. J. Rogers. The ceremony was performed at St. John's Church, Bangalore, by the Rev. Thos. Foulkes. By this marriage Dr. Shortt had issue three daughters, Annie, Rosie, and Queenie, and two sons, John Balfour, and Sydney Rogers, of whom the latter died in infancy.

his approval of my work from another very old and staunch friend :—

“OFFICE OF SURGEON-GENERAL, I. M. D.,
FORT ST. GEORGE, 14th July 1876.

I have the honor to present to you a copy of Surgeon-Major Vandyke Carter's Book on Leprosy and Elephantiasis, in acknowledgment of the value of your researches into those diseases.

(Signed) EDWARD BALFOUR,
Surgeon-General, I. M. D.”

The following letter from the Secretary to the well-known Native statesman and patriot, is another proof of the interest taken by enlightened native gentlemen in my experiments :—

“INDORE DURBAR OFFICE, 19th Sep. 1876.

I beg by desire of Mr. Ragunath Rao, Minister to His Highness Maha Rajah Holkar, to send you two roots which are represented to possess the virtue of curing snake-bite. The snake referred to is the cobra. I have marked on each the quantity to be administered for each bite; but you may use your own discretion in the matter. Mr. Ragunath Rao will be obliged by your informing him of the result of any experiment you may deem fit to make with these roots. The roots by banghy post, which kindly acknowledge.

(Signed) B. GANAPATHI IYAR,
Secretary to the Minister of Indore.”

No more of *Autobiography* was written by Dr. Shortt; but he selected several more letters

for publication. The two following he received towards the close of his official career. Of them, the second was occasioned by the fact that, knowing that the silk industry was pursued in the Mysore Province, he had sent the Chief Commissioner his Notes on the Tassa Silk-worm.

“THEYNAMPETT, *October 26th*, 1876.

Can you help me to give Professor Rolleston any information about *tape-worm* in India? I enclose a letter I received from him, which kindly return.

(Signed) HENRY KING.”

“MYSORE COMM'R.'S OFFICE, BANGALORE,
1st February 1877.

I am directed by the Chief Commissioner to thank you for your letter, No. 1459, of the 26th January 1877, forwarding a short account of the Tassa silk-worm, with three original drawings of the insect in its different stages.

(Signed) J. G. CLARKE, Major,
Officiating Secretary.”

Dr. Shortt had acquired his Commission rather late in life. When, therefore, he was 55 years old, his career as a Surgeon in the Indian Army had been short. But it had been eminently busy and useful. He had done none of his work perfunctorily, but all of it with exceptional thoroughness; and he had not con-

finer his attention to merely what might be demanded of an officer in his position, but had investigated very many matters of practical importance ; he made several experiments in naturalizing foreign products, and had always contributed something—often, very much—to the right understanding and use of what he investigated. His official work had always, from the first, been approved and commended by all his superiors and by Government. For his unofficial and extra-professional labours, and his excursions into by-ways of useful knowledge, he had received prizes, and frequently the thanks of Government, and of scientific persons and of learned Societies. Nor had his promotion been slow. Yet when he came to be 55 years old, his position was not as high as he and his friends wished, and, indeed, as might have been expected in a man of his attainments, work and usefulness. The general rule that officers must retire when 55 years old was enforced in his case. His deafness would naturally interfere with his work as a medical practitioner, and make it difficult for him to act in concert with others, especially in consultative bodies. Moreover, Dr. Shortt, though kind and honorable, was not very polished ; and though he wrote so much, and to such good purpose, his style of writing was

not very elegant. These considerations doubtless added force to the very strong objection there always exists in India to any obstacle whatever to promotion in the commissioned ranks. Though Dr. Shortt was still vigorous and could do much work; and though his official position and touring enabled him to learn and bring to light much that he could not reach, if retired and stationary; yet when 55 years old, he had to retire. But an appreciative Government gave him a step in rank when he was pensioned.

“ANTHROPOLOGICAL INSTITUTE,
4, ST. MARTIN'S PLACE, W. E., 3rd April 1877.

The Council learned with great regret that your leaving the service might induce you to seek to retire from Ordinary Membership of the Institute. Desirous to mark their sincere appreciation of your kind services for many years, and their gratitude for your promise of continued interest in our proceedings, they desired me to beg your acceptance of a Diploma of Corresponding Member, which I send herewith.

(Signed) EDWARD W. BRABROOK.”

“Proceedings of the Board of Revenue, dated 25th July 1878.

Insect Specimens.—The Board are much obliged for his interesting communication which will be submitted to Government and forwarded to all Collectors for information, and to Dr. Bidie.

(Signed) C. A. GALTON,
Acting Secretary.”

G. O., 2nd September 1878, No. 1415.

Insect Specimens.—Recording Proceedings of the Board of Revenue submitting Dr. Shortt's account of the Insects sent to him from several districts, and tendering the thanks of Government to Dr. Shortt.

“GOVT. OF MADRAS, MILITARY DEPT.,
26th September 1878.

No. 441. Extract from a Military Despatch from the Right Honorable the Secretary of State for India, dated 29th August 1878, No. 63, para. 7.

With reference to your Military letter, No. 40, dated 2nd April 1878, I have to inform you that His Royal Highness the Field-Marshal Commanding in Chief has approved of a step of Honorary rank on retirement being granted to Surgeon-Major John Shortt of the Madras Army.”

“BERLIN, 19th December 1878.

BERLIN ANTHROPOLOGICAL SOCIETY.

Commissioned by the Committee of the Berlin Anthropological Society, I have the honor to send together with this letter the diploma for a Corresponding Member. At the same time I request you to have the kindness to forward the diploma for Dr. Burnell at Tanjore, which enclosed in the roll to this gentleman, as the Post Office here refused to accept packets for the said place “Tanjore.”

(Signed) MAX KUHN,

Secretary.”

On the Shervaroy Hills—the “Sorrento without the Sea” of Sir M. E. Grant Duff—Dr. Shortt had purchased an estate that had been

known as the Retreat Hotel. There he settled; and he called the place "The Retreat." In part of the grounds he put down at great cost a variety of trees and plants, especially such as were not indigenous; and in part he cultivated coffee, but not to any great extent. He also gave attention to silk worms and the improvement of the breed of sheep, oxen and poultry.

In his retirement Dr. Shortt was always most ready in bad cases to give medical advice and attendance to all who asked for them; and in many desperate cases he was the means of saving life. If asked to charge, he would charge as became his rank in the rare cases in which he did charge at all for medical attendance. Poor natives he continued to treat at his own house and at his own expense; and this not only in bad cases, but also in some others where the patients would have no treatment but his. More than once, when a surgical operation was required, he drove the patient in his own carriage from his own house to the hospital, and there operated, because he had not the necessary instruments at home. Whenever the medical officer at Yercaud had occasion to leave the station for a few days, Dr. Shortt would kindly take over medical charge of the same. Nor did he confine his attention to the human subject; he

would prescribe for a sick horse, or a sick cow, or a sick bird. He would do this for the poor as well as for the rich : he would visit both alike ; and he liked to make presents of seeds, plants, pigeons, poultry, &c. At Yercaud, Dr. Shortt took the initiative in several matters which afterwards passed out of his hands to those of others who could not agree with him as to their management. He started the formation of the Planters' Association on the Shervaroy Hills, and was its Chairman for some time, during which it did good work. But new comers found his deafness objectionable. He first attempted the formation of a Volunteer Company on the Shervaroy Hills ; but it was not till others took up the project that it succeeded. He brought about the opening of a school at Yercaud for the children of Planters' writers and of poor East Indians. This school was kept going till it was made over to the clergyman who came to take permanent charge of the station. After a few years Dr. Shortt helped considerably towards the opening of another school for a higher class of children ; and on his own grounds he paid a teacher to instruct the children of his servants and labourers, and also gave practical proof of his interest in the evangelization of the Malayâlis or hill-men.

He took a leading part in the collection of money for the celebration of the Queen's Jubilee and for a memorial of the same. His weakness, however, latterly was thought to be that he too often wished to lead and to direct, while his deafness and strength of will rendered it difficult for him to give as much consideration as was required to the wishes of others.

But Dr. Shortt's work at Yercaud was not only of local interest. He still continued experiments with alleged antidotes for cobra-poison, whenever anything new in that line was submitted to him to be tested. And he would occasionally lecture on his favorite subject. During one of his experiments or lectures, when the cobra was slow to bite the intended victim, he pinched the snake's tail, whereupon the reptile bit the Doctor's thumb. The fang, however, first struck the nail, so that the wound was very slight indeed, and he suffered no worse effects from it than a little anxiety for a few minutes.

He used to like sending exhibits to exhibitions in India and in England; and he invariably received medals, money-prizes and honorable mention. The acquaintance with the products and people of the country which he had taken pains to acquire during his journeys and

tours on duty, as well as his knowledge of the vernaculars, enabled him to select the place where the best specimens of any particular product were to be found ; and thus he was good at making collections of various classes of Indian products, as well as at procuring the best individual specimens. And his own efforts at improving live stock were very successful. He took a gold and a silver medal as well as a diploma at the "Colinderies" Exhibition ; and his exhibits at the great Agricultural Exhibition in Madras a few years ago brought him considerable money prizes.

Dr. Shortt continued, in his retirement at Yercaud, to correspond with learned men and Societies, by whom, as well as by the Governments of India and of Madras, he was still held in high esteem. To savants and learned Societies he continued to send information and gifts of specimens, &c. The Madras Government applied to him for information more than once, but especially in the matter of the cocoa-palm, regarding which, at their request, he produced a monograph, which they published with illustrations in *photogravure*. His work was found useful during the Colinderies Exhibition, and appears to have furnished matter for some interesting newspaper articles in England ; though the

publication of the monograph in India was tardy. Many people in Southern India used to seek information from Dr. Shortt, both directly and through the newspapers, on a variety of subjects. In this country he was generally regarded as "a perennial 'enquire-within-for every thing,' " as he was called by one of the Editors of the leading newspaper in this Presidency, when the latter sought the good Doctor's help during the scare that not long ago prevailed regarding poisonous fish on the East Coast. Dr. Shortt preferred communications through the newspapers, because the information he thus gave was the more widely diffused. His letters to the *Madras Mail* might almost be said to treat *de omnibus rebus et quibisdam aliis*.

There was catholicity in Dr. Shortt's personal interest also. Many poor Europeans and East Indians who wanted employment used to apply to him to know where they might find it, and to be recommended; and he would take pains to find places for the deserving. In fact, *quâ data porta* he tried to be useful.

The following letters illustrate to some extent Dr. Shortt's communications with the outer world while he lived in Yercaud:—

"MADRAS, 24th April 1879.

I am sorry your V. S. matter is so long in hand, but it is "progressing favourably," which is a great point. A

swell in England writes to me for a specimen of a *Naryen's opalus* cetonias beetle, which he says is found in the Wynaad. Can you help him to it? His name is

E. J. HIGGINS,

62, Finsbury-Park Road, South Hornsey, London.

(Signed) H. S. THOMAS."

"55, BERNER'S STREET,
OXFORD STREET, June 20th, 1879.

With the Treasurer's compliments and best thanks. The Honorary Secretary will communicate with Dr. Shortt immediately he hears from Mr. R. B. Foote relative to Dr. Shortt's valuable present to the Society of the twelve volumes of the Madras Quarterly Journal."

MANANTODDY, July 7th.

I have lately been trying various experiments with the wild silk-worms of South India—one of them being, to extract good gut for fishing purposes. English gut is unreliable and very expensive. I have an idea that the gut obtainable from the large Tassa worm will be thicker and longer and stronger than the ordinary Mulberry-worm gut. Can you tell me the *modus operandi* for procuring gut? I have only managed to get two Tassa cocoons: can you get me a few to breed from? I shall be very happy to pay anything they may cost to collect—coolies, &c. Thirty or forty will be ample.

(Signed) RHODES MORGAN."

"BANGALORE, 18th August 1879.

I have to thank you much for your last note and for the Journal of the Anthropological Institute received the

day before yesterday. I am now sending you by book-post my notes about the cromlechs at Sivandurga which I have opened. I still think I ought to send it (the manuscript) to the Indian Antiquary, as of more general interest to Indian observers, than to a Scientific Society at Home. I don't doubt all the Scientific Societies take in the Indian Antiquary; and that therefore anything worth further notice will reach them as soon and well as if the paper were contributed direct. I must trust to your interest in the subject to give you the patience to wade through the manuscript. I need not say I shall be grateful for any criticisms you may give me.

(Signed) B. B. BRANFILL."

“ROYAL COLLEGE OF SURGEONS,
LINCOLN'S INN FIELDS, 16th December 1879.

I have to-day received a cask containing thirty-four crania; and I see by the name outside the cask that we are indebted to you for this welcome addition to our collection. It is most kind of you to take the trouble to collect and send them; and I shall be very glad of a line to say where they are from, or anything you know of the people to whom they belong. This will, of course, increase their value greatly. As they so much resemble the Maravars you were so good as to send before, it is probable that they are the same; but until I hear definitely from you, I cannot enter them as such in the catalogue. Possibly you may have written to advise me of the arrival of the cask, but if so, the letter has never reached me. I sent you by post, about a month ago, the catalogue which I have just published of our collection of human osteology, in which you will see the Maravar crania mentioned. I hope that it will reach you safely and be of some interest. It will at least show you how poor we are

in Indian specimens. Could it be possible to get skulls of genuine Todas of the Neilgherries? They would be *most interesting*.

(Signed) W. H. FLOWER."

"MADRAS, 18th July 1880.

As you perhaps know, I am getting out the Madras Journal of Literature and Science. Can you kindly give me a contribution for the number I have now in the press? I know you have so many things collected and written, that I trust you will favor me with something from your pen.

(Signed) GUSTAV OPPERT."

"BANGALORE, 28th July 1880.

I shall be glad to hear if slab stone Monuments of this particular style (*i.e.*, with round heads) are to be met with on or around Salem Hills, as I should suppose they must be, as I have found them in South Arcot, North Arcot, (extreme N. E.) Salem, and Mysore. I shall be much obliged also if you can lend me, or tell me where in this part of the world I can obtain a perusal of, Colonel Meadows Taylor's paper on "the Prehistoric Archæology of India" in the Journal of the Ethnological Society.

DD. 2/16 REGT., CALICUT, August 9th, 1880.

As I understand that you go in for collecting Zoological specimens to a large extent, may I trouble you so much as to ask if you will kindly let me know the scientific name of what is known ordinarily as the "winged Blood-sucker"? It is of the same size and color as the ordinary common blood-sucker, but has, in addition, small wings. Would you kindly also let me know if such a specimen is rare or not? I have never met with one before.

(Signed) JACK J. BOURKE."

"Government of Madras, Revenue, G. O., 9th August 1880, No. 944, expressing with remarks—obligations to Doctor Shortt for the replies he has furnished to the queries of M. David, of St. Etienne, on the subject of tassa and other wild silk-worms of India.

"TULLOCH'S GARDENS, MADRAS,
18th October 1880.

Knowing your zeal in botanical and other matters of a scientific character, I venture to ask a favor of you. I have promised to send a Wardian case of Shervaroy Hill Ferns to my friends, Drs. D. D. Cunningham and King, of Calcutta, and intended to have run up for a few days to collect them; but I cannot get away at present; so am sending my head maistry, a very experienced and respectable man, with a Wardian case. Might I ask you kindly to allow him shelter with your gardeners for a few days? And if you can give him any assistance, in advice as to collecting, I shall be very much obliged. I have told him to bring down a few in a basket for myself; but I have so many plants that I do not care to add much to my collection. Pray excuse the liberty I am taking.

(Signed) R. CADELL."

"EGMORE, 28th November 1880.

I thank you very much for your kind note, and also for the poison, which I will send home to my friend. He will doubtless be delighted to fall in with Mr. Blyth and obtain information from him. Again thanking you for your kindness,

(Signed) E. GIBSON."

“BERLIN, BLUMESTOSS, 15th July 1882.

A few days ago I heard from Dr. Edward Balfour that you had settled down on the Shervaroy Hills, and mentioned it yesterday in the Committee of our Anthropological Society. I had hardly done so, when every body insisted that I must at once write to you (our Secretary is absent for a holiday), and ask if you duly received your nomination as Corresponding Member of the Berlin Anthropological Society? We are really afraid that the diploma never reached you, as we never received an answer from you. I am very glad of this opportunity of thanking you once more for the very many acts of kindness for which I became personally indebted to you during my stay in India, and for the many valuable objects which our Society as well as our Royal Museum owe to your own generosity or your influence. It was, in fact, for this we elected you, on the 12th April 1878, together with Dr. A. Burnell and Dr. Rajendra Lalamitra, who both have become valuable members of our Society. Pray let me know if you received our Diploma, and if the Proceedings of our Society are regularly sent to you.

(Signed) F. JAGOR.”

“SAWAUL WAREE, 1st February 1883.

As I am taking some interest in the Science of Anthropology, and as I see your name frequently mentioned by M. Popinard in his text-book on Anthropology, I take the liberty to request of you the favour to kindly mention the name of the works which you may have published on the subject, and let me know how I can obtain them.

(Signed) D. G. DALGADS, M. D.”

“SANTA COOPA, MERCARA, COORG, 28th February.

I am very anxious to get a good book on the management of English Fowls, and hear you are a good authority

on the subject. Would you be so very kind as to write me a line, telling me the best book to get? I should be very much obliged to you if you will. I have a great number of fowls, but find one or another often ill with various complaints, and do not understand treating them. Hoping I am not asking too much of you,

(Signed) (MRS.) C. E. MURRAY-AYNSLEY."

"WOS HULLY ESTATE, AMUTTY, COORG,
9th March 1883.

I hope you will excuse the liberty I am taking in asking you to settle a wager.

A declares that hydrophobia can be got by other ways than by the bite of a dog, or *any other animal*.

B bets against that; and both consent to abide by your decision.

Hoping that you will forgive the trouble I am giving you.

"YERCAUD, 14th March 1883.

I am much obliged to you for your letter of the 5th. Perhaps you may be able to give me information on the points noted overleaf (below). If so, may I trespass on your kindness so far as to ask you to supply me with answers to the questions.

(Signed) F. J. ROMILLY.

P.S.—If it is not asking too much, might I be allowed to see your register or notes for an hour or so at the Hotel? I would take great care of them, and then I could answer my questions myself.

Rainfall at Yercaud and Shervaroy Hills for 1882.

(1) What was the heaviest fall last year? and date?

- (2) What was its duration?
- (3) Are the hills most effected by the S. W. or N. E. monsoon.
- (4) In what monsoon do the heaviest bursts come?"

"MADRAS, 22nd April 1883.

Excuse my troubling you. You are aware I have a class at the Agricultural College, Sydapet; I teach Botany (all branches of the subject, including economic and horticultural botany). My object in writing to you is to get some help on matters about grafting, ringing, pruning and other means adopted for improving fruit. I should like also to have a brief account of the cultivation of tea, coffee and cinchona, in India, and your views about Liberian Coffee. I would value the information very much for one reason in particular, that is, your thorough knowledge and great experience in these matters. I would like to have specimens of insects known to prove destructive to fruit, leaves, seed and timber in this country. If you have none, please favour me simply with their names and what they are in the habit of destroying, &c. I would be content to have just a few lines about each matter. Please do not undertake the work unless you have time and feel disposed to do it. I often thought of writing to you; reluctance to take up any portion of your valuable time is my excuse for not doing so.

(Signed) R. WILLEISIS."

"2, OXFORD SQUARE, HYDE PARK,
17th May 1883.

I would be glad to hear better accounts of coffee prospects. You who planted several different fruit-trees, and had also pigs and fowls, must be better off than others:

but that is not saying much. I have done a thing with which I trust you will not be displeased—I have written to the Secretary of State recommending that he should present you with a copy of the snake book by Dr. Ewart, as a well merited recognition of your public services in your enquiries into the effects of the poison of snakes. I have not any doubt but that it will be done. I shall be glad to hear that you are no longer handling snakes.

(Signed) EDWARD BALFOUR."

"MADRAS, 28th June 1883.

I hope you will give us the benefit of your knowledge and experience in the matter of fish disease, a subject of great importance just now. Your letters are always welcome; and many of our readers regard you as a perennial, 'Enquire-within-for-everything.' You will see Mr. Thomas' letter in last night's mail. Would you like to try some Australian wheat seed on the Shervaroys? I have some seed from Adelaide, but am in doubt whether you should sow now or wait till the north-east monsoon. I am taking some interest in this experiment, as I believe we can make wheat grow in this Presidency.

(Signed) HENRY CORNISH."

"GOVERNMENT OF MADRAS, REVENUE, G. O.,
8th December 1883.

No. 1542. *Tussa Silk worm*.—Letter from Dr. Shortt on the mode of conducting experiments with. Order, dated 8th December 1883, No. 1542, Revenue, para. 2:—

The thanks of Government are due to Dr. Shortt for his interesting communication."

(True Extract.)

(Signed) SIDNEY LAFFAN,
for Secretary to Government."

“ GOVERNMENT OF MADRAS, REVENUE DEPARTMENT.

Proceedings of the Board of Revenue on a letter from Dr. Shortt on “Bodu,” or *Philipæa Indica*. Resolution, dated 21st February 1884, No. 595, submitted for the information of Government. The thanks of the Board are due to Dr. Shortt for this very interesting letter.

(Signed) G. MACKENZIE,
Acting Secretary.”

“ SIMLA, 18th September 1884.

I am directed to advise the despatch to your address of a Diploma, and a silver medal awarded to you at the Amsterdam Exhibition of 1883 for Agricultural produce.

(Signed) T. W. HOLDERNESS,
Under Secy. to the Govt. of India.”

“ GUINDY, 5th January 1885.

I ought to have conveyed to you ere this His Excellency's very best thanks for your timely gift of *Viscum Monili-forme*, so nearly allied to the English Mistletoe, and so pleasantly recalling it.

(Signed) A. AWDRY.”

“ DEPARTMENT OF REVENUE SETTLEMENT AND AGRICULTURE,
MADRAS, 24th January 1885.

I take the liberty of forwarding to you copy of a letter addressed by Mr. Henry Sherley Price, of the firm of Kirk, Price and Goulty, of London, to this Government which has been transferred to me for disposal, and shall be obliged if you will kindly write a note on the cocoanut palm and its several products, uses and applications.

2. If you can illustrate your monograph by illustrations, and send with it any interesting samples of native skill, or specimens of the fibre, wood, nut, or leaf, I shall be much obliged, and shall repay you whatever they may cost you.

3. My knowledge of the very great interest you take in all matters of science, especially of such as may conduce to the advancement and welfare of India, must be my excuse for thus trespassing on your time and good nature.

(Signed) W. WILSON,

Director of Rev. Settlement & Agriculture."

"GOVERNMENT OF MADRAS, REVENUE DEPARTMENT.

Letter from the Director of Revenue Settlement and Agriculture, dated 19th February 1885, No. 257, para. 4:—

Dr. Shortt writes that the thornless cactus nopaul or *Opuntia cochinellifera*, which is the variety cultivated in gardens at Malta, is already thoroughly acclimatised in Southern India, and is now growing in his own garden at Yercand on its own roots. While strongly advocating its cultivation as a fruit bearer, and as a fodder for cattle, he thinks it unnecessary for these reasons to import or to graft it."

"DEPARTMENT OF REVENUE SETTLEMENT AND AGRICULTURE,
20th July 1885.

Submitted to the Board of Revenue in continuation of this office, No. 1266 A., dated 10th current.

Dr. Shortt, the Board are aware, takes great interest in agricultural matters, and will, the Acting Director has no

doubt, if entrusted with the work of experimenting with Italian bees, give careful attention to it.

(Signed) J. F. PRICE,

Ag. Director of Rev. Settlement & Agriculture."

"2. The Acting Director, in thanking Dr. Shortt for the very interesting account of bees which is given in his letter under reference, will be glad to receive any further experiences he has on the subject, more particularly with reference to the Italian bees which are supposed to have established themselves on the Shervaroy Hills.

(Signed) JOHN FREDERICK PRICE."

"PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following D. O. S. regarding Dr. Shortt's Monograph on the Cocoanut Palm. Order thereon, 23rd July 1886, No. 4365 :—

The Government approve the suggestion to print the monograph on the Cocoanut Palm prepared by Dr. Shortt ; and they accordingly direct that 500 copies be struck off at the Government Press. The thanks of His Excellency the Governor-in-Council will be communicated to Dr. Shortt for the trouble he has taken in preparing the pamphlet, of which twelve copies will be forwarded to him for his private use.

The papers read above will now be transferred to the Director of Agriculture, who will supervise the publication of the pamphlet. He should arrange for the reproduction of the illustrations in consultation with Mr. Havell and Colonel Sargeant.

(True Extract.)

(Signed) H. E. STOKES,

Secretary to Government."

“ SOUTH CANARA, COLLECTOR'S OFFICE, MANGALORE,

30th November 1886.

From J. STURROCK, Collector.

I have the honor to acknowledge with thanks the receipt of the seeds referred to in your letter of the 22nd instant, and forwarded to me by desire of the Director of Revenue Settlement and Agriculture.”

Dr. Shortt kept a diary very regularly, making his entries even when ill and in great pain. It contains indications that the climate of the Shervaroy Hills did not suit him so well as that of the plains; for he used to suffer from asthma and bronchitis. He seems, however, to have remained at Yercaud mainly on account of his family, and also because the soil and climate of the place are very favorable to various experiments which he conducted in horticulture, apiculture, sericulture, and the breeding of cattle, sheep, poultry, &c. Regarding all these matters and the weather, his diary is full of memoranda—jottings of various facts which might seem uninteresting and even trifling to the general reader, but which doubtless had their value to one who knew how to make use of them. Of more general interest will be a few brief extracts which suggest that he was a man of simple, practical piety, an affectionate husband and father (especially fond of his sons), a thoroughly good friend, a kind master, and

kind to animals, of which he was very fond. Noteworthy is the fact that not a single harsh or censorious remark is to be found in the diary, or mention of any difference or disagreement with anybody; though the Doctor was careful to note the friends and acquaintances whom he met each day.

1885, *March 8th*.—Received vaccine lymph from Madras and vaccinated horsekeeper's child *14th*, Vaccinated a Malayâli child brought by— *7th April*.—Continue still unwell went over in a chair in the evening and saw Mrs.——'s baby *20th*, (At Madras) Julia reports Monien's death at Salem *26th*, dined with the S——s and G——s and had a nice pleasant evening *June 23rd*.—(At Yercaud) Jack (his son, then aged 5 years) planted a Himalayan pine this afternoon *29th*, Saw M—— put two orange grafts on his trees. Returned and joined Julia and the chicks at Pagoda Point, this being dear Julia's birthday *30th*, M—— sent two Camelia plants to be grafted *12th July*.—Heard of Dr. M——'s death. *13th*, Wrote to Mrs. M—— and received reply *20th*, sent Mr. N—— a chenmoyer and an almond plant *August 20th*.—Drove part of the way and rode the rest to M—— at G——. Had two orange grafts put on and returned *29th*,—— has come to us for a change *October 17th*.—Mr. B—— (the Apothecary) called in the evening and asked me to see a woman in labour at the hospital. Went at once and performed craniotomy and relieved her *18th*, Mr. B—— came over to see the sick Malayâli I went to hospital and saw the woman for whom I had performed craniotomy *November 23rd*.—Went in a chair to

H—— to see D——, said to be ill Seem to have taken a chill on my way home Sent—— with “Fluff,” to place the dog in the train for Gooty and see him safe to Arkonum. 24th, Taken ill with violent pains and sickness: ill all night and confined to bed all day. 30th, Sent capital case of instruments to Mr. P—— the new Apothecary

1887, *January 1st.*—We have been spared by the grace of God to enter on another year this is Queenie’s third birth-day: she is growing to be a strong little girl for her age. A source of grief to us is that has become painful again: the dear child is now in bed 2nd. *Sunday*, Went to service with J—— and the chicks, and had Communion 11th *February.*—Drove to Volunteer drill ground and saw Mr. S—— about provision for school children at Jubilee 16th. *Jubilee*, Went to the public demonstration with J—— and chicks. Sent all the servants and coolies with flags and banners. Spent a pleasant afternoon, and got home after 8 P. M. 3rd *April.*—Mrs.—— very low; was sent for at 5 A.M.; was with her all day; she seemed better in the evening. 18th, Arrived at Erode at 12 noon 19th, visited exhibition grounds. 22nd, Nine prizes were awarded me May 9th.—(At Yercaud) Attended annual meeting of the Auxiliary Bible Society, and occupied the chair—a large meeting 10th, At about 8 P.M. three ladies were brought to our house in a semi-conscious state, having been stung by bees. They were accompanied by three other ladies and three gentlemen. Kept the first three ladies for the night and made them comfortable, and found dinner for the rest 11th, The three ladies left this morning for their homes: they were well but weak. The other ladies and gentlemen called for them 19th, Attended

the Temperance Meeting and entertainment; saw to the arrangements: a large audience in attendance 23rd, J——'s Tennis tournament has begun: a lot of people have come to see the play 24th, Had a snake antidote test; four witnesses present; the dog died
June 4th.—Lectured on snake poison and conducted experiments. *July 9th*.—Posted lily bulbs to Col.—— 21st, Took the sick Malayâli woman in the carriage to the hospital and left her there 22nd, Rode over to the Hospital and saw the Malayâli woman *August 12th*.—As Mr. P—— (the Apothecary) was away, was asked to see Mrs. C——'s little boy; saw him and prescribed for him 13th, Asked by Mrs. L—— to see her friend's baby, who was seriously ill. Saw and prescribed. When returning, caught in two miles of rain. Saw Mrs. C——'s child, and was at Dispensary and Hospital 27th, An attack of lumbago 28th, Pain severe—confined to room Called to see L——'s youngest son, who is supposed to have typhoid fever 29th, Started at 8 A.M. to see L——'s child at B—— (six miles away). Prescribed and got home at 3 P.M. 30th, Went to B—— to see L——'s child.

1888.—This year Dr. Shortt paid visits to Madras, Salem (to attend an exhibition), Mysore (exhibition) and Bangalore.

January 1st.—Thank God for his mercy in permitting us to see this day 31st, On a note from Mrs. L——, saw her sick buffalo and prescribed for it *February 11th*.—The Bishop of Madras and his Chaplain and Miss and Mr. W—— had early coffee with us 27th, (Madras) Left specimens at the Museum *March 13th*.—(Yercaud) On a note from Major P——, called at the Hospital and took the apothecary with me to see

P——'s English cow. Treated it 15th, This is Jack's birthday: he is 8 years old to-day. May the Lord in His mercy spare him to become a man; and may the boy grow in grace and in reverence to God's laws. J—— had a children's party 19th, Got all my exhibits ready, and started them off for Salem. Nothing left but myself. Will leave to-morrow morning 23rd, Got some prizes at the Exhibition; don't exactly know at present what they are 30th, (Yercaud) Sent Mr. S—— a pair of Dorking fowls April 3rd.—Sent down exhibits for the Glasgow Exhibition May 20th.—Asked to see Mrs. S——'s baby, ill of convulsions. Went at once, and was there till 10 A.M. Went again at 3 P.M. and remained till 7 P.M. Child bad 21st, Saw S——'s baby morning and evening: the child seems well again 22nd, Saw S——'s baby which is now well. L—— sent his pony over for treatment: attended to its feet June 2nd.—Sent Tassa-silk cocoons to Messrs. Wardle and Waily 3rd, Was asked to see Mrs. H—— by her husband, Surgeon H——. Found her very low. Made suggestions and left 4th, Saw Mrs. H—— both morning and evening: she is progressing well 5th, Archbishop Colgan, Father K—— and others came to breakfast 6th to 10th, Saw Mrs. H—— daily; found her going on well 20th, Was asked to see Mrs. S—— by Mrs. L—— and the Apothecary: saw her and prescribed for her 22nd, Called and saw Mrs. S——; found her better July 18th.—By request went to see B. D—— and prescribed for him.

The above were all very serious cases of illness, which terminated happily. Notes of the Doctor's own weakness and indisposition begin to appear oftener than before. On the 25th

July 1888, a second son was born to the Doctor, —a fine child, of whom he became very fond.

September 1st.—A cow in difficult labour was brought by a Mahommedan. Performed Cæsarian operation and removed a cow calf from her *10th*, Called at 10 P.M. to see Madame B—— at the request of Mrs.——, and prescribed for her *11th*, Saw Madame B—— both in the morning and in the evening and prescribed for her *12th* to *17th*, Called and saw Madame B——: she was very much better and progressing steadily *19th*, Went to J—— valley (5 miles off) to see Mr. M——'s children, who were reported sick *October 8th.*—Was busy with articles for the Mysore Exhibition *11th*, Arrived at Bangalore; met M—— at station Went to C——'s; had tea there. Experienced much kindness from M—— and C——. Took train for Mysore. *15th*, (Mysore) Went over the Exhibition grounds. Met Mr. Ricketts, and had a chat with him *16th*, At the Exhibition had a chat with Col. Hay; joined the Live Stock Committee, which did not finish work till 2 P.M. *17th*, Was at the Exhibition at Col. Hay's request. In the afternoon saw photos taken of some of the prize animals *18th*, Exhibition closed to the public, on account of Rani's visit *20th*, Mr. C—— came and took me away to be a judge of Forest products at the Exhibition. Met Sir Harry Prendergast, the Resident, who shook hands cordially, and said he was glad to see me, and that he had been reading my interesting writings *22nd*, Again on Committee on Forest products. Again cordially met by Sir Harry Prendergast, who again said he had read my writings with great interest *23rd*, Not feeling well. Kept my bed the greater part of the day *25th*, Arrived at home Still not well

..... A wet day Baby not well 26th, A nasty wet day Baby very bad P—— (the Apothecary) came to see him Baby died about 7 P.M.

The loss of this child (a boy) affected Dr. Shortt with a lasting sorrow. He had also recently heard of the death of a sister. These events told none the less upon his health and spirits, because his grief was undemonstrative. He stayed much at home; and his interest in things generally seemed to flag. Yet when asked, he was found ready to attend cases of serious illness. Thus, on the 8th November the Diary says:

T. S—— called and asked me to see his daughter A——, who was ill. Saw the child and prescribed for her.

And on the 30th there was another such case, both involving repeated visits. The 5th December records inclement weather, and “severe pains,” which he had been suffering for two or three days, and which went on increasing till the 12th, when he endured “great agony.” On the 13th, (after bringing up blood) he began to mend, and continued to do so, till on the 19th he “felt very well;” but he was not able to leave the house till Christmas eve, when he called at M——’s and F——’s, who “were all delighted to see him again.” On Christmas day he attended Holy Communion in church. Till

the end of the year he went about as before among his old friends, sometimes going a considerable distance.

1889, *January 30th*.—At Mr. D——'s special request presided at the annual Tamil meeting of the London Mission.

In the beginning of February he was again poorly ; yet he attended the Salem Exhibition on the 18th and 19th, and took prizes for fibres, buffaloes and sheep. He then went to Madras, and attended the Flower Show at the Horticultural gardens, where also his fibres got him a prize. The following day he was taken ill with severe spasms. It is supposed that he suffered from cancer in the stomach. He was attended by Dr. Hunt, and obtained relief. On the 26th February he writes :—

Better this morning. Received congratulations from my wife and children about my birth-day, with presents, a card case and a pair of slippers. Should like to have been with them this day.

He improved but gradually in health ; and was unable to leave the house of his friends in Madras for several days. On the 7th March he began paying visits to his friends in Madras. On the 14th and 17th he suffered again. Yet on the 19th he attended the Annual meeting at the Botanical Gardens, and the Convocation of the Madras University in the evening, where he saw and spoke to the Governor.

On the 20th March, hearing of the illness of a very dear old friend at Yercaud, he hurried back ; but himself suffered another sharp attack of pain at Arconum, and on the 21st arrived in Yercaud in poor health. Yet on the following day he went to see his old friend, and also (at the Apothecary's request) two sick native children at the Hospital. He regularly attended his friend, and was able to bring about an improvement in his health. He went round paying calls, and twice visiting even the Green Hills (5 miles away), whence he returned at 3 and 4 P.M. He attended the sick child of one of his friends, and the Inspection of the Yercaud Volunteers. On the 13th April he learned with deep grief the death, under very painful circumstances, of a beloved friend in Madras. Meantime his oldest friend on the Hills had a relapse ; and Dr. Shortt attended and watched by him, even sleeping at the house four nights, and attending also the sick children and cattle of friends. On the 18th and 19th April he was confined by illness to his own house. Yet on the 20th he, when still unwell, visited his patients twice at the request of their friends. On Easter Sunday he was ill again.

On Monday, when weak, he attempted to go out into the garden very early in the morning ;

and was attacked with faintness and spasms, and fell. For some time he refused to allow himself to be carried into the house, but sat outside, watching his pigeons. At length at his own request he was helped in; and he had to take to his bed. Not only did the Apothecary attend him, but the District Surgeon, who happened to be on the Hills for a day or two, came twice on Tuesday to see him, and said there was great danger. On Tuesday morning Dr. Shortt prepared for Holy Communion, which he received in the afternoon; and that night, or rather, very early on the following morning, 24th April 1889, at the age of 67 years, 2 months, Deputy Surgeon-General John Shortt entered into rest from all his labours.

On Wednesday evening he was buried with Military honors, the Yercaud Volunteers mustering very strongly for the purpose. The funeral was attended by a large number. Many natives also were present; and some non-Christians asked permission to throw earth into the grave of one who had been a benefactor to them. Malayâlis or hill-men fired guns in their villages on this day, as at the death of one of their own headmen. When Dr. Shortt's Will was read, it was found that he had bequeathed his books to the Madras Medical College.

APPENDIX A.

Extracts from Annual Reports of Vaccination, with the covering letter of the Inspector-General, Medical Department, to the Chief Secretary to Government, and the Government Orders thereon, given in succession.

1865.

The Inspector-General of Hospitals, Dr. James Shaw, in para. 11 of his letter to Government, says :—

“ Dr. Shortt having laboured zealously in organizing the Department under his superintendence, I have much pleasure in bringing his services to the favourable notice of Government.”

Government Order thereon, dated 11th May 1866, No. 169, para. 8 :—

“ In concluding this brief review of the operations of the year, the Government deem it only due to Dr. Shortt to record their approval of his judicious arrangements in organizing and working his staff of Vaccinators, and his own zealous exertions in supervising their work.

(Signed) J. D. SIM,
Chief Secretary to Government.”

1866.

Inspector-General Mackenzie, M.D., in his covering letter to Government states, para. 12 :—

“ In conclusion, I would desire to record my approval of the manner in which Dr. Shortt has conducted the duties of his Department. He has been indefatigable in visiting the various

circles, and in interesting Local Committees to employ vaccinators of their own."

Order thereon, 18th July 1867, No. 844:—

" These results are in great part owing to the exertions and good management of Dr. Shortt, who has, it appears, been generally assisted by his subordinates. Dr. Shortt's experiments on the propagation of vaccine virus on the lower animals have led to valuable results. The remarks of the General Superintendent with reference to the protective power which he believes vaccination may possess over cattle, and the benefits which may accrue from vaccinating cattle in villages where operations are going on, are especially worthy of consideration and experiment, both with a view of testing the results, and propagating lymph.

(Signed) R. S. ELLIS,

Acting Chief Secretary."

1867.

Inspector-General Mackenzie, M.D., in his covering letter to Government, states, para. 10:—

" In conclusion, I would desire to express my high sense of the energy and zeal displayed by the Superintendent-General in the performance of his laborious duties, and of the manner in which his efforts in the cause of vaccination have, as a general rule, been seconded by the Deputy Superintendent of his Department."

Order thereon, 21st October 1868, No. 1322, para. 6:—

" The Government concur in the acknowledgment made by the Inspector-General of Dr. Shortt's zeal and energy in the performance of the duties of his office, and in attributing to his efforts the progress which vaccination has made within the Madras Presidency."

1868.

Inspector-General Mackenzie, M.D., states in his letter to Government, dated 16th June 1869, para. 13:—

" In carrying out the reorganization of his Department, the Superintendent-General has shown his accustomed energy and

ability; and I have no doubt the anticipated result of the increase of Superintendents and Vaccinators will appear when the work of the current year comes to be reviewed."

1869.

Dr. Mackenzie's letter to Government states, at para. 13 :—

" Dr. Shortt has shown his usual energy and ability in carrying on his duties, and expects, when the Department is completed, and the staff more accustomed to their work, that the number of operations will be greatly increased."

1870-71.

Inspector-General E. Balfour, in his letter to Government, dated 17th October, para. 12, states :—

" On the whole, the Department worked energetically and successfully during 1870-71; and I have to record my satisfaction with the able manner in which the Superintendent-General conducted his duties."

Order thereon :—

" The Government appreciate the efforts made by the Superintendent of Vaccination to encourage private vaccination."

1876-77.

Letter from the Sanitary Commissioner to Government. Order thereon, dated 26th June 1878, No. 1116, para. 4 :—

" The year was marked by the retirement of Surgon-Major Shortt. The Government desire to place on record their high appreciation of his devotion to this benevolent branch of Medical Science, and of his zealous and intelligent labours, both by personal exertion and by his writings, to extend its benefits to the people of this Presidency.

(True extract.)

(Signed) H. B. GRIGG,

Ag. Under-Secy. to Govt."

1877-78.

Letter from the Sanitary Commissioner on the Annual Report of Vaccination,

Order thereon, dated 17th October 1878, No. 1526 :—

“Towards the close of the year to which the above Report relates, Dr. Shortt, the Inspector-General of Vaccination retired from the Public Service, and was succeeded by Surgeon J. H. Laing. The Government have already in their order, dated 26th June 1878, No. 1116, expressed their appreciation of Dr. Shortt's devoted services in furtherance of vaccine knowledge among the people of this Presidency.

Para. 6. “The organization of special establishments for Vaccine work in the Presidency Town, and elsewhere, appears to have been very effective, and to reflect much credit on Dr. Shortt and his immediate subordinates.”

(True Extract.)

(Signed) H. B. GRIGG,

Under-Secretary to Govt.”

APPENDIX B.

OFFICIAL CAREER AND WORKS OF SURGEON-MAJOR JOHN SHORTT, M.D.,

Madras Medical Department.

Commission as Assistant Surgeon, 20th September 1854.

Commission as Surgeon, 20th September 1866.

Surgeon-Major, 20th September 1874.

Landed at Madras on the 29th October 1854; placed in Medical charge of Ganjam Topographical Survey. Joined at Ganjam, December 1854. Continued in Medical charge during 1855 and part of 1856, doing duty, during the Recess of the Survey, at the Garrison Hospital, Vizagapatam.

Posted to B. Troop, Horse Artillery, joined and did duty from 31st May to 20th October 1856; subsequently, to 40th Regiment N. I., Kamptee, 20th October 1856. In Medical charge of 17th Regiment N. I. from 15th October to 26th December 1856; marched with the Regiment as far as Hingoolee; returned to Kamptee, and marched with my own, the 40th Regiment N. I. to Cuttack; joined Zillah Surgeoncy, Chingleput, June 1857.

Appointed Superintendent-General of Vaccination, January 1865. Designation changed to Inspector of Vaccination, 26th November 1874.

Passed Interpreters' Examinations in Tamil, 9th August 1855, Telugu (Oral Interpreter), 21st September 1855, and Hindustani, 6th July 1857.

Received "*Honorary Reward*" of 1,000 Rupees for passing in two languages, *vide* G. O. C. C., dated 14th November 1857.

Received Prizes for Fibres, Gums, &c., at the Chingleput Local Agricultural Exhibition to the extent of Rupees 210, February 1859.

Received a 1st Class Medal from the Madras Exhibition of 1859 for Fibrous materials.

Received a Gold Medal from the Manchester Cotton Supply Association for the successful growth of Exotic Cotton, 1862.

Received from the International Exhibition of 1862, 2 Medals and 2 Honorable Mentions for various articles contributed.

Received a Prize of 50 Rupees for Aloe Fibre from the Bengal Agricultural Exhibition, 1st February 1864, and Honorable Mention for samples of various descriptions of Cotton, &c., and Exhibitor's Medal.

Received a Prize of 100 Rupees for an Essay on Indian Cattle at the Agricultural Show, Sydapet, 1874.

Received Government Prize 800 Rupees for an Essay on Indigo, 1869.

Received from Agri-Horticultural Society of India, a Prize of 1,000 Rupees and a "*Gold Medal*" for an Essay on Exotic Cotton, 1870.

Titles.

I am a Member, and also a Licentiate of Midwifery, and Licentiate of Dental Surgery, of the Royal College of Surgeons, England; Doctor of Medicine of the University of Aberdeen; Member of the Royal College of Physicians, London; A Member of the Veterinary College, Edinburgh; and Fellow of the following Societies: the Linnean, Zoological, and Royal Asiatic. Fellow and Corresponding Member of the Anthropological Institute, and Obstetrical Society of London, Corresponding Member of the *Societie de-Anthropologie* of Paris, Fellow of the Madras University, and Honorary Fellow of the Agri-Horticultural Society, Madras.

Contributions.

Contributed numerous Natural History and other Specimens to the British Museum, England; King's College, London; Royal College of Surgeons, England; Crystal Palace Company, London; Science and Art Departments, South Kensington; Veterinary College, Edinburgh; College of Dentists, England; East India House Museum, England; Linnean, Zoological and Obstetrical Societies, London; Anthropological Institute of Great Britain and Ireland; *Societie de-Anthropologie*, Paris; Medical College and the Local Museum, Madras.

Favourable Notice.

Received approbation of the Government of Bengal through Madras Government for services rendered to the rude inhabitants of the jungles of Orissa. *Vide* Military Department, No. 747, Extract from Minutes of Consultation, dated 6th March 1855.

Vide Extract from Minutes of Consultation, No. 336, dated 14th August 1855. Approval of a Topographical Report of the S. W. P. Districts, directing same to be printed among the Records of Government.

Thanks from Head Assistant Collector, Chingleput, for services rendered in connection with State Prisoner, Sultan Bux, dated Chingleput, 28th July 1857.

• Thanks of Board of Revenue for copies of Prize Essay on Indigo, 6th December 1862.

Proceedings of Government, dated 30th May 1862, No. 1,204, recording appreciation of Government of exertions to improve the cultivation of Cotton.

Extract from Proceedings of Chamber of Commerce expressing obligations for persevering exertions in the introduction of Exotic Cotton in the Chingleput District, dated Chamber of Commerce, Madras, 28th May 1862.

Proceedings of Board of Revenue, dated 29th July 1863: "The Board are much obliged to Dr. Shortt for his Report on Peruvian Cotton."

Obligations of Board of Revenue for examples of Flax. *Vide* Proceedings of the Board of Revenue, dated 22nd April 1863.

Obligations of Board of Revenue for Report on the cultivation of Imphoe. *Vide* Proceedings of Board of Revenue, dated 20th May 1863.

Proceedings of Board of Revenue, dated 19th January 1864, stating that "the Government acknowledge with pleasure Dr. Shortt's laudable exertions for improving the Cotton cultivation of Chingleput, &c."

Proceedings of Madras Government, Revenue Department, 13th July 1864. "The Government are much obliged to Dr. Shortt for his Report regarding the prevalence of an epidemic among sheep in the Chingleput District."

Thanks of the Chamber of Commerce for services in connection with the distress among the Cotton Weavers of Conjeevaram, Madras, 10th December 1865.

Thanks of the Chamber of Commerce for an exhaustive Report on the Cotton Weavers of Conjeevaram, dated 16th September 1864.

Do. do. Madras, 26th January 1865.

Proceedings of Madras Government, Revenue Department, dated 1st June 1866, No. 1347: Acknowledgments of Govern-

ment "to Dr. Shortt for his very valuable Report on some forms of Cattle disease prevalent on the Shevaroy Hills."

Proceedings of Government, Revenue Department, dated 23rd March 1866: "The Board are much obliged to Dr. Shortt for the Specimens of Cotton Gins used by Natives of India."

Proceedings of Government, Revenue Department, dated Madras, 2nd May 1867, conveying the thanks of the Board to Dr. Shortt "for his obliging Report on the use of wild Cockscomb as green food for the cattle in this country."

Proceedings of Government, Public Department, dated 14th February 1868: "Government thanks Dr. Shortt for his contributions in aid of the inquiries now being instituted in connection with the ravages caused by the Borer insect on coffee plantations."

Received thanks of the Government of India, No. 5,031, for testing an antidote for Cobra poison, dated Fort William, 17th November 1870.

Proceedings of Board of Revenue, dated 30th April 1872: "The Board are indebted to Dr. Shortt for his letter on Snakes."

Proceedings of Government, Educational Department, 9th August 1872: "Thanks of Government for lectures given on the Snakes of Southern India."

Thanks of Government of India, dated Simla, the 30th August 1872, for a Pamphlet giving a brief account of the Tasseh Silk Worm, accompanied with drawings of the Insect.

Proceedings of Government, Public Department, 13th May 1873, No. 478: The importance of a scheme for poisoning Tigers by Strychnine acknowledged.

Proceedings of Madras Government, Public Department: "Obligations of Government for a report on the Collection of Arms and Implements, dated 26th June 1874, No. 716."

Letter from Surgeon-General E. Balfour, dated Fort St. George, 14th July 1875, No. 5,651, conveying the thanks of Government for valuable assistance to diffuse information in

his Manual of Vaccination and translations of it into Tamil, Telugu, Hindustani, Canarese, Malayalum and Oorya.

Proceedings of Government, Revenue Department, 8th June 1875, No. 893 :—3. "The thanks of Government are due to Dr. Shortt for his practically useful contribution to the discussion of this important subject. (List of Poisonous Snakes.)"

Thanks of Chief Commissioner, Mysore, for an Account of Tasseh Silk Worm and three original drawings of the Insect. *Vide* Letter from Officiating Secretary, dated Mysore Chief Commissioner's Office, Bangalore, 1st February 1877.

1.—List of Books published by Dr. Shortt.

Medical Topography of South Western Political Districts, &c., 1855.

Modified and adapted MacLean's Hindustani Treatise on Vaccination for popular use in English and the several Vernaculars, published by Government, 1856-57.

Prize Essay on Indigo Cultivation ; the same translated into Tamil, Telugu and Hindustani, 1860—62.

Hand Book of Coffee Planting in Southern India, 1864.

Lectures on Vaccination, 1865-66. Translated into Oordoo, Tamil and Telugu.

Prize Essay on Exotic Cotton.

Hill Ranges of Southern India.

Manual of Family Medicine, 1875.

Manual of Indian Cattle and Sheep, 1876, (three editions).

Manual of Vaccination ; the same translated into Tamil, Telugu, Hindustani, Canarese, Malayalum and Oorya.

A Guide to the People's Park, 1876.

Do. do. do. in Tamil, 1876.

Edited, Forestry in Southern India, by Major-General Morgan, 1884.

A Monograph on the Cocoanut Palm, printed by Government, 1887.

2.—Papers contributed by Dr. Shortt.

I.—To the Madras Medical Journal of Science.

1. Aneurism of the external Carotid, treated successfully by Ligature of the common Carotid Artery, Vol. II, p. 163.
2. Cases of Cardiac diseases, Vol. II, p. 306.
3. On Foeticide, Vol. III, p. 262.
4. A contribution to Ethnology, Vol. IV, p. 103.
5. On Homicide as met with in civil practice in India, Vol. IV, p. 227.
6. Arsenical poisoning from wall paper, Vol. V, p. 460.
7. Remarks on cases of Trumatic Tetanus, Vol. V, p. 321.
8. Leper attacked with Small-pox, Vol. V, p. 187.
9. On Poisoning by Stramonium, Vol. VI, p. 287.
10. On Dislocation of Right Knee-joint, Vol. VI, p. 449.
11. On sudden death from fatty Degeneration of the Heart, Vol. VII, p. 97.
12. Report on the Cultivation of Imphee, Vol. VI, p. 158.
13. Account of the outbreak of Cholera in the Jail of Chingleput during March 1863, Vol. VII, p. 236.
14. Observations on certain injuries of the Spine, Vol. VII, p. 426.
15. On Coffee-leaf Tea, Vol. VII, p. 335.
16. On the Febrifuge properties of Thevetia Verifolia, Vol. VIII, p. 299.
17. A case of diseased Bone, Vol. VIII, p. 205.
18. Notes from Medical practice, Vol. VIII, p. 409.
19. Cases of Cancer of Uterus, Vol. IX, p. 141.
20. General and Medical Topographical Report of the Madras District, Vol. IX, p. 222.
21. A case of Amputation for Gangrene of the Leg, Vol. X, p. 393.

22. On *Curcuma Longa* as a Prophylactic in Fevers, Vol. XII, p. 170.
23. A case of Hydrocephalus, Vol. XII, p. 225.
24. Case of Chronic Hydrocephalus, p. 377, Vol. I, 1870.
25. Osteo-sarcoma, p. 147, Vol. I, 1870.
26. Case of Snake-bite, pp. 351 and 451, Vol. I, 1870.
27. Experiments with Snake-poison, pp. 214, 275, Vol. I, 1870.
28. Antidote to Cobra Poison.
29. Cases of Snake-bite, pp. 71, 101, 348, 422 & 81, Vol. II, 1870.
30. Note on the infection and propagation of Measles, p. 177, Vol. II, 1870.
31. Case of Marasmus in a child, p. 157, Vol. I, 2nd Series.
32. Snake (Cobra) bite successfully treated, p. 236, January 1870.
33. On *Lusus Naturæ*, p. 241, Vol. III, 1871.
34. Sterility, the result of disease, p. 5, Vol. III, 1871.
35. The Cobra, p. 171, Vol. III, 1871.
36. The protective power of Vaccination, p. 351, Vol. III, 1871.
37. Snake-poison, pp. 16, 165, 346, 426, Vol. IV, 1871.
38. A Brief Account of the Tasseh Silk-worm, p. 113.
39. Experiments with Snake-poison, p. 199, Vol. V, 1872.
40. Experiments with Snake-poison, pp. 17, 249, Vol. VI, 1872.
41. The Tuckatoo and Bishkopra, p. 99, Vol. VI, 1872.
42. A case of Lipoma, p. 89, Vol. VII.
43. A new instrument for vaccinating, p. 187, Vol. VII.

II.—To the Indian Annals of Medical Science.

1. A case of rupture of the superior Vena Cava within the Pericardium, p. 186, Vol. VI.
2. The rise and progress of the Civil Dispensary, Chingleput, p. 521, Vol. VI.

3. A successful case of excision of the knee-joint, p. 188, Vol. VI.
4. Remarks on the treatment of the Intermittent Fever of Kamptee, with large doses of the Sulphate, and Amorphous Solution, of Quinine in the European Horse and Foot Artillery, Nagpore Force, 17th and 40th Regiments, N.I. :—European Artillery from 31st May to 20th October 1856; 17th Regiment, N.I., from 15th October to 26th December 1856; and 40th Regiment, N.I., from 28th October to 3rd December 1856, and from 11th May to 14th February 1857, pp. 97, 101, Vol. V.
5. Medical Topography of Modern Orissa extending through 19° and 20° Latitude, North, and between 83° and 88° East Longitude, Vol. V, pp. 161 to 196.
6. Impracticable labour in a Dwarf, p. 292, Vol. IV.
7. Snake bite, p. 299.
8. On the treatment of Scrophulous Ulcers with Tincture of Cantharides, Vol. IX, p. 80 and 83.
9. Vulnus Incisum, Vol. VIII, pp. 267 and 268.

III.—To the Obstetrical Society.

1. A singular case of unsuspected Pregnancy and awkward Delivery, p. 202, Vol. IV.
2. A case of sudden and unconscious Delivery, p. 210, Vol. IV.
3. Medical History of Women in Southern India, p. 103, Vol. V.
4. Description of a deformity of Arms and Hands, with an illustration, p. 205, Vol. VI.
5. On Criminal Abortion, p. 6, Vol. IX.

IV.—To the Anthropological Society.

1. Notes on Differences in Height and Stature of Europeans and some Natives of India, p. 213, Vol. II.
2. Description of a living Microcephale with various measurements and illustration, p. 257, Vol. II of Memoirs.

3. An account of the Bayadères or Dancing Girls of Southern India, p. 182, Vol. III of Memoirs.
4. An account of some Tribes, the supposed Aborigines of Southern India, p. 373, Vol. III.
5. The Kojahs or Eunuchs of Southern India.
6. The Tribes of Orissa.
7. An Account of the Armenians of Southern India.
8. The Dombes of Southern India.
9. A brief account of three Microcephales, with illustrations.
10. An account of a Religious Festival comprising Leaf-wearing and the hanging or cheddul, p. 333, Vol. IV.
11. The Fishermen of Southern India, p. 193, Vol. V, Ethnological Society's Journal.
12. An account of the (Jwangs or Pathua's) Leaf-wearers of Orissa.
13. A contribution to the Ethnology of Jeypore, with Tables, &c., p. 246, Vol. VI, Ethnological Society's Journal.
14. On the Wild Tribes of Southern India, p. 186, Vol. VII.
15. An account of the Hill Tribes of the Neilgherries, p. 230 ; Vol. VII.

V.—To the Lancet.

1. On the Physical constitution of cobra-poison.
2. Original experiments connected with Small-pox Inoculation and Vaccination on the lower animals and Man.
3. A case of Snake-bite successfully treated.
4. A new Vaccinator, with illustration.

VI.—To the Indian Medical Gazette.

1. Two cases of re-section of the Knee-joint, with remarks.

VII.—To the Linnæan Society.

1. An account of a Heronry in the Chingleput District.
2. On branched Palms.

3. On the Puttu Mango or Slerotium Stipitatum.
4. Coffee-leaf Tea.

VIII.—To the Revenue Register, Madras.

1. Tobacco, Its History and Cultivation.
2. Manurial substances, Mineral, Vegetable and Animal.
3. Indigenous breeds of sheep in the Madras Presidency.

IX.—To the Agri-Horticultural Society.

1. A Report on the Castor oil bean or *Recinus Communis*.
2. An account of the Musaceæ or Plantain order.
3. A List of wild plants and vegetables used as food by the people in Famine times in the Madras Presidency, 3rd July 1881. Submitted to Government.

Contributed various Reports and Papers to Government, the Revenue Board and the Agri-Horticultural Society, on Agriculture, General produce, Stock, Cattle diseases, Aboriginal Tribes, &c., &c., and on other subjects to the Local Journals.

All these Papers have appeared in the Transactions, Memoirs, Journals, Proceedings, or other publications of these different Societies.

I have also conducted numerous Snake (Cobra) experiments, and tested, in the interests of the public, over one thousand five hundred so-called antidotes to Snake poison, received from all parts of India, Australia, America, England and France, at much personal risk to myself, great expense and much labour. Antidotes sent by the Government of India and the Madras Government were also tested and reported upon. I have also experimented with, and reported on, the so-called "*Vermin Asphyxiator*" sent by the Government of India; and I have described and fixed the number of poisonous snakes, and pointed out those most common, from which the greatest mortality is occasioned to human life.





